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Integrating Handicapped Children in Alberta Preschools: Examining the Dimensions

by

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Sally R. Barros

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled Integrating Handicapped Children in Alberta Preschools: Examining the Dimensions submitted by Sally R. Barros in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

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Abstract

A formative evaluation approach was used to examine the crucial dimensions of integrating handicapped children in Alberta preschools.

A survey of present research efforts in this area assisted in the identification of relevant dimensions of integration. Basically three types of research issues have been addressed: What is the nature of the interaction between handicapped and non-handicapped children? What is the attitudinal impact of integration on the non-handicapped children? What are the programmatic features that maximize a positive integration experience?

The present study examined these three dimensions in integrated kindergarten and day care settings. In addition, important descriptive information was collected on the nature of the handicapped children and their families. The following types of information were collected: normative and criterion referenced assessments on the handicapped children, behavioral observations of the interaction between the handicapped and non-handicapped children, attitudinal data from the non-handicapped children, and information regarding important programmatic features such as staff training, individual program preparation, and parental involvement.

The information collected was analyzed using a number of different techniques (statistical and non-statistical).

Essentially, the data revealed that, demographically, the handicapped children and their families come from all aspects of the socio-economic spectrum. Many families experienced difficulties in the early identification and diagnosis of their child's difficulties, but they were generally satisfied with their child's placement in an integrated program. ECS staff felt positively toward integration, but poorly prepared. Major differences existed between urban and rural ECS programs in the use of aides.

Day Care staff also felt positively towards integration but more adequately prepared than ECS staff. Day Care staff, however, were more likely to use outside agencies in program preparation for the handicapped child.

The normative assessments (The McCarthy Scales of Children's Abilities) indicated that as a group these children exhibited mild to moderate delays in general cognitive, memory and motor development. There were, however, a significantly greater number of lower functioning children in day care than ECS, and in rural ECS than urban ECS.

The criterion referenced assessments provided more specific information on these children's deficiency areas. Two major deficiency areas emerged: the pre-academic area and the advanced motor skill area.

The relationships between children's behavioral patterns and play activities were analyzed using a Pearson product moment correlation. Salient demographic variables

were also included. The primary mode of interaction for this group of handicapped children was verbal. Higher functioning children, however, displayed significantly more cooperative play and interactive behavior with peers, whereas the lower functioning children displayed significantly more isolate play, and more interactive behavior with teachers.

The S.A.A.T. drawings revealed an essentially positive, accepting attitude on the part of the non-handicapped peers towards the handicapped children in their programs.

The implications of the present study are discussed in terms of the present implementation of integrated services for preschool handicapped children, as well as directions for future research in this area.

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This study involved the time and energies of a great number of people over the past three years. I would like to thank a few special people who, in particular, helped make the completion of this work a reality.

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I. INTRODUCTION

A. The Problem

The study which will be described in the following pages was intended to be part of a long term research project that would examine the process of integrating handicapped children within preschool programs in the province of Alberta. It was envisioned that the project would have three distinct phases. The first phase would be exploratory and formative in nature, and would address a basic issue: what is the nature of integration as it is currently occurring in Alberta preschools? Arising from this basic issue, it was anticipated that further more specific research hypotheses would be generated regarding sucessful integration which could be tested in phase two of the project. The third and final stage of the research would be to pull together the results of phases one and two to create an inservice package for teachers that would assist program personnel presently integrating, or planning to integrate, handicapped children.

In order to formulate more specific research questions regarding the integration process, our initial task was to formulate and examine its crucial dimensions. Models and methodologies to use in examining this particular educational process were notably absent from the literature. Although researchers had identified particular aspects or features which they considered crucial, it appeared no one had formulated a more global approach to the process as a whole. Further, specific instruments that could be used in such an endeavor needed to be identified and tested. The major tasks, therefore, of the present study became clear: to isolate the dimensions of integration as an educational practise, to develop and/or test instruments suitable for examining the process, and to use those instruments to describe the integration experience of handicapped children in Alberta preschools. The next section of this chapter presents the perspectives and assumptions about the practise of integration as it shaped this current research effort.

B. Scope and Limitations of the Study

It is important to emphasize at the outset that this study was not intended to demonstrate the efficacy of integration but rather identify the critical parameters of the integration process itself. This formative research, however, is based on the premise that integration is a desireable objective and represents the right of the handicapped child to grow and learn in as "normal" an environment as possible. The process of educational integration is but one of many outcomes that has occurred as a result of Wolfensberger's (1972) conceptualization of the normalization of all human services for handicapped individuals.

The word integration will be used consistently throughout this thesis, and has been chosen deliberately to avoid the confusion and connotations created by its more popular synonym "mainstreaming". As Saur, Layne, and Hurley (1981) put it, 'mainstreaming' is one of the most widely used and yet one of the most poorly defined words in the educational lexicon today"(p.9). Further, the term integration is more frequently associated with the placement of handicapped children at the preschool level, while the term mainstreaming has generally been associated with the return of handicapped children to the "mainstream" of regular school programs. Integration as it will be examined here refers to the placement of special needs children within regular preschool programs for all or part of their educational day. In addition, integration is seen as a means of providing an appropriate education for handicapped persons rather than as an end in itself. Integration, therefore, has a number of alternative options which can be selected according to the needs of a given handicapped child and resources available to the program/school. The primary goal of integration becomes, therefore, the achievement of an appropriate education for the handicapped student and not the achievement of total integration for all handicapped students per se.

Another set of terms that appear extensively and interchangeably throughout this work is "special needs" and "handicapped". These words have been as widely used and as poorly defined as the word "mainstreaming", but for a longer period. Hence they too are fraught with negative connotations and apprehensions. In the current study, therefore, no attempt was made to define these terms; rather we let staff identify the children within their programs whom they perceived required extra assistance to function optimally. The type and extent of assistance required varied greatly among the group of children described here. A common element among them, however, was the fact that all programs had applied for, and in most cases, received, extra funds to provide this additional assistance.

C. Purpose of the Study

Integration at the preschool level has been a priority in Alberta for some time, preceding in fact integration at the school level. Formal recognition of the process began in 1972 with the establishment of the Integrated Day Care Program funded through Services for the Handicapped, Alberta Social Services and Community Health. The Early Childhood Services Branch followed in 1973 with the establishment of special funding allocations through the Category 'A' and Program Unit Grant designations. However, there has been little, if any, systematic investigation of the process in the ten years since the inception of these programs. The current study hopes to carry out such a systematic investigation by addressing crucial questions with regard to the nature of the integration process. Let us now turn to a more detailed examination of the research in this area in an effort to identify these crucial questions.

II. LITERATURE REVIEW

A. Introduction

In order to understand the directions that research in the area of integration has taken, it is important to consider the historical development and anticipated outcomes of this educational practise. This brief review of its early beginnings will help place later research efforts in a more easily understandable perspective.

The trend away from segregated school placements for handicapped students appears to be a world wide phenomena(Sinson & Wetherick, 1981; Wilton & Densem,1977; Davis, 1980). However, in this present study, the beginnings of this movement will be traced as they occurred in the United States in view of the considerable implications they present for Canadian educational policy.

The rise of integration as an educational practise in the U.S. has been fostered by a number of parallel, but supportive, philosophical and educational movements. At a philosophical level, integration is closely linked with the anti-segregation movement, the civil rights movement, and the principle of normalization (Wolfensberger, 1972). Educationally, integration has been buoyed along by a growing disenchantment both with the process of labelling children with special needs, as well as the rather minimal outcomes resulting from segregated education, particularly for the mildly retarded (Dunn, 1968; Jaffre, 1966;

Jones,1972). Further, many educators were optimistic about the positive outcomes claimed for integration as an educational alternative. These educational and philosophical movements culminated in the passage of PL94-142 (The Education for All Handicapped Children Act, 1975) which legislated the compulsory enrollment of handicapped children within the 'least restrictive environment'. This landmark legislation, to be fully implemented by September, 1978, made mainstreaming/integration an educational requirement in the U.S.

Legislation alone, however, will not make integration an educational reality. The issues surrounding this concept and its implementations are emotional and complex. Sarason and Doris (1979), for example, state that at its root integration is a moral issue based on three questions: how do we want to live together? on what basis do we give priority to one value over another? how far does the majority go in accommodating the needs of the minority? Further, they go on, the moral issues underlying integration, deeply rooted, ingrained and reinforced by tradition, and institutional and social structure and practise, will not be changed except over a long period of time. Inconsistencies abound. The traditional public school systems are considered by some as mirror images of what exists in colleges and universities. These institutions are required to bridge the gulf between special and regular education, and yet the law does not require any change in college and university training centres who continue to educate school personnel in the tradition of the "most restrictive alternative".

Some researchers (Blacher-Dixon et al, 1981; Hobb et al, 1975; Carlberg and Kavale, 1980; Meisels, 1977) feel that the move to integration was premature and that it may not be appropriate for some groups of children. These researchers feel that the policy of integration is in advance of present data collection, analysis, and conclusions drawn from empirical research. In addition to the complex and emotional nature of the integration issue, research in the area is further complicated by the lack of a common definition for this concept. Generally agreed upon aspects of integration include some degree of temporal, social, and instructional integration. Many researchers identify social integration,that is, do the handicapped and nonhandicapped actually interact, as the key element. Other researchers (Corman & Gottlieb, 1977) feel the concept is broader. They identified three parameters of mainstreaming: integration, educational planning and programming processes, and clarification of responsibilities among educational personnel.

Although the parliamentary equivalent to PL 94-142 does not yet exist in Canada (although some provinces have some legislation with similar aspects), the trend has been to follow the American's lead and begin to integrate handicapped children within the mainstream of the regular school system. This appears to be particularly true at the preschool level due to a generally held belief that integration is easier with young children than with those in the upper grades. This belief seems linked to the concept of elasticity that surrounds young children, and hence programs for young children (Galloway & Chandler, 1980). Guralnick (1976), for example, states that young children are less perturbed by individual differences and that early childhood programs are more apt to have mixed groups of children (ages, sizes, and developmental levels), as well as providing more individualized programming than the regular school system. Others (Pain, 1982; Larrivee & Cook, 1979) relate ease of early integration to the centrality of play as a learning tool in early childhood programs. Peers are more appropriate models of play behaviors than adults. Further, teacher attitudes have been found to be increasingly negative with ascending grade level (Larrivee & Cook, 1979) so there appears to be less resistance to integrated placement at the early childhood level.

Given the growing tendency to integrate handicapped and nonhandicapped preschool children within the same program, what does the literature have to tell us about this global and complex phenomena? Structuring the research for presentation is difficult: studies are diverse and lacking commonality. There is a lack of well researched guidelines for implementation or well researched methods for evaluation (Allen, 1980). Guralnick(1981) states that debate with respect to goals, outcome measures, and evaluation criteria for mainstreaming will certainly continue for some time. Further, no generally agreed upon format or set of issues can be found that could be used to examine research in this area.

In culling the literature, however, several common themes appear which provide an organizational framework for examining the research. These themes are: the rationale for integration; interaction within integrated settings; attitudes toward handicapped individuals; and programmatic features of integrated preschool programs. Research in the last three areas stems from the claims made in the first category. Hence, it seems appropriate to consider the rationale underlying integrated placements, before proceeding onto the other three research areas.

B. The Rationale for Integration

On a higher level, integration's goals are described as having the individual exhibit "normal" behavior, and having the individual live as normal a daily existence as possible (Neisworth, 1975). Stated another way, the goals for early integration of handicapped children are stigma reduction/removal and academic, behavioral, and social competence enhancement (Galloway & Chandler, 1980; Blacher-Dixon et al, 1981). More specifically, reasons for including handicapped preschool children in regular programs include: (1)the handicapped children benefit academically, socially, and behaviorally from interaction with normal peers. It is assumed that the nonhandicapped peers can stimulate, act as a skilled model, and even give feedback to the handicapped child during interaction. Similarly, it is assumed that the handicapped children can imitate positive and at times negative behaviors displayed by the nonhandicapped children. It is also hoped that this early training equips the handicapped child with processes that allow adaptation to novel situations. At an even more basic level, many researchers feel that some minimal level of interaction must occur for any potential benefits of integration to result (Guralnick, 1981).

(2)The general level of societal understanding and acceptance of the handicapped may be increased through early exposure of nonhandicapped children to handicapped children in integrated settings. Many researchers assume that negative feelings toward the handicapped have not yet developed at this age, and through appropriate structure and experience, positive attitudes toward the handicapped will begin and continue into later life. As a spin off from integrated early programming, many researchers point to the positive effect of integration on the adults associated with integrated programs, specifically the parents of the nonhandicapped children, and the staff within the programs themselves. In addition, placing handicapped children in regular programs helps place the responsibility for treatment of exceptional children on society in general.

(3)Many claim program individualization as an educational goal is converted into action through integration. The teacher can more readily monitor each child's progress when dealing with heterogeneous groups of children. The exploration of alternative curricular materials and instructional strategies enhances the teacher's instructional repetoire which should in turn positively effect all children in the class (Bricker & Sandall, 1979). (4)Integration is a preventative rather than a remedial strategy. Placement in an integrated setting avoids unwanted behaviors that may result from differential placement. (5)It may be cheaper.

Obviously, educators have high hopes for the potential benefits of integrated programming. A detailed examination of some of the research in the areas of interaction within integrated programs, attitudes towards handicapped individuals, and programmatic features of integrated preschools will help evaluate the validity of this enthusiasm.

C. Interaction within Integrated Preschool Programs

Although academic, behavioral, and social benefits have all been claimed as a result of interaction between handicapped and nonhandicapped preschool children, it is only the area of social interaction that has received serious attention from researchers. Social interaction is felt to be important because it stimulates the academic and behavioral benefits of integration, and secondly because many feel there must be some minimal level of social interaction if benefits beyond those that could be achieved in a segregated setting are to occur.

A number of researchers have investigated the interaction of handicapped and nonhandicapped children in preschool settings. Although some researchers (Peterson & Haralick, 1977; Dunlop et al, 1980) have demonstrated the existence of social interaction between handicapped and nonhandicapped children, by far the majority of studies (Cavallaro & Porter, 1980; Guralnick, 1981; Wilton & Densem,1977; Fietelson et al,1972; Kennedy et al, 1976; Sinson & Wetherick, 1981; Simon & Gillman, 1979; White, 1980; Novak et al, 1980) have shown that handicapped children demonstrate less mature forms of play, less social interaction, and are socially isolated from their normally developing peers. Further some researchers (Guralnick, 1981; Simon & Gillman, 1979; Sinson & Wetherick, 1981) found that this isolation increased over time. Comparability among studies is lacking and makes generalizability of the findings difficult, however, it is just this lack of commonality that lends credence to the findings. Despite differing ratios of handicapped and nonhandicapped children, different types of handicapping conditions, different program settings and different research methodologies, the handicapped children were socially isolated from their nonhandicapped peers.

Guralnick(1981), for example, investigated the effects of group composition (12 nonhandicapped; 9 mildly handicapped; 5 moderately handicapped; 11 severly handicapped children) on social participation, constructiveness of play, and communicative interactions. The results demonstrated that more advanced children engaged in higher levels of social play, played more constructively, communicated more, and received more communications from other children, but received fewer prompts and reinforcements from teachers. Conversely, less advanced children distributed their communications to and received their communications from each of the four groups about equally; however, more advanced children directed only 14% of their communications (expected to be about 42% on the basis of availability) to less advanced youngsters. Guralnick concludes that some degree of social isolation of the less advanced children is suggested, and increased over time, although direct rejection was not observed.

Feitelson et al (1972) compared the social interaction of 48 disadvantaged and 48 privileged preschoolers in Israeli preschool classrooms: three containing hetereogeneous groups of both disadvantaged and advantaged children, and one containing a homogeneous group of disadvantaged children. Heterogeneous disadvantaged children had more social interaction units than did homogeneous disadvantaged children, however, the heterogeneous privileged and disadvantaged children interacted mainly within their own groups. Also the children in heterogeneous classrooms developed increased interaction with peers while homogeneous disadvantaged children remained dependant on adults. The authors explained the lack of interaction between the privileged and disadvantaged children as stemming from a lack of shared experiences.

Wilton and Densem (1977) had similar results with intellectually handicapped preschoolers in New Zealand. Intellectually handicapped children (I.Q. below 50) attending regular preschool (heterogeneous group) showed significantly higher levels of social participation than intellectually handicapped children attending special preschool(homogeneous group) and a significantly lower level of social participation than their nonhandicapped classmates.

Kennedy et al (1976) in a longitudinal study of severely to profoundly deaf children in regular elementary classes found that hearing impaired children interacted more with teachers than did their peers. However, they were as socially accepted as their classmates and perceptive of their status. Academically, the two groups were also equivalent, with the exception the hearing children scored higher on a word knowledge test.

Sinson and Wetherick (1981) in an interesting study using video cameras to examine the interaction of Down's Syndrome in a normal playgroup found that normal children made "heroic attempts" to establish contact with the Down's

Syndrome children but eventually gave up. As a result, the Down's Syndrome children became isolates in the group relating only to the adult helpers. This occurred despite the fact that the Down's Syndrome children were well prepared and capable of participating in all activities of the normal children. The authors relate their findings to the fact that the D.S. children did not maintain mutual gaze which may be interpreted by the nonhandicapped children as gaze aversion, evidence of a desire to avoid interaction.

Simon and Gillman (1979) found that when four preschool visually impaired children were mainstreamed, sighted pupils and teachers became anxious, resorted to stereotypic behaviors and demonstrated increasing avoidance of the handicapped children over time.

Novak et al (1980) found that handicapped children (sensory, cognitive, or behavioral deficits) in integrated settings played less with peers and more with objects, initiated and received fewer social interactions with peers and spent less time in close proximity to other children. They also displayed heightened visual awareness. These behavioral differences' appeared consistently across settings.

White (1980) found the interaction between handicapped and nonhandicapped preschoolers was effected by both the number of handicapped children and by teacher behavior. In one preschool handicapped children were isolated and rejected, whereas in another preschool with more handicapped children and more nondirective teachers there were no significant differences between the handicapped and nonhandicapped children. The children in the study demonstrated a number of handicapping conditions including Down's Syndrome, mild to moderate retardation, cerebral palsy, language problems, and motor problems.

Although these studies suggest handicapped children may be socially more active in heterogeneous settings, it appears that these interactions are generally directed at either teachers or children with similar characteristics as themselves. Further, it is generally agreed among most researchers that for "true" interaction to occur, the mere presence of handicapped children is not enough. Some type of intervention is required to stimulate the desired interaction. A growing body of research with both normal and handicapped children has been investigating the efficacy of training children to model and reinforce appropriate behaviors of other children.

Rubin (1977) found, for example, that SES and age of the model as well as the modelling environment impinged on the type of behavior displayed. Lower SES children were less mature both socially and cognitively in play styles; younger children displayed more sensorimotor play, while older children demonstrated more dramatic play, and lastly most social play occurred in the house and vehicle corners and in the reading and number activities.

Langlois and Downs (1979) found that although there was no difference in the affiliative behaviors between attractive and unattractive children, when attractiveness of both child and peer were considered more affiliative behavior was exhibited to peers who were similar to themselves.

Fouts and Liikanen (1975) explored the effects of age and developmental level on imitation in children. Forty children were divided on the variables of age, and developmental level as assessed by performance on a Piagetian type task. The results showed that following a televised task, older subjects imitated more than younger ones, however, an interaction effect occurred: for younger subjects, the lower developmental subjects imitated significantly less, whereas for older subjects, the reverse was true. They concluded that children different in age, and developmental level possess different tendencies to imitate, and it becomes important to determine the ages and developmental levels at which learning through observation and learning through imitating models are optimal.

Not only do children differ in their tendency to imitate (learn), but also in their use of teaching strategies. Koester and Bueche (1980) found that demonstration, assistance, and explanation were the most frequent forms of teaching strategies used by 4 year olds teaching 3 year olds block design tasks. Males used correction significantly more than females, and classroom placement affected teaching style. The authors related classroom differences to familiarity with 'tutee' and differences in the adult teacher's style.

Peterson et al (1977) investigated the ability of handicapped and nonhandicapped preschool children to imitate since it is felt that this ability is critical to increased interaction between these two groups. Fourteen handicapped and fifteen nonhandicapped children were coached in serving as a model for other children in a task sequence containing 10 simple behaviors. The modelling occurred in a 1 to 1 situation. The results showed that both handicapped and nonhandicapped subjects exhibited the same amount of peer imitation, but both were more likely to imitate a model who was nonhandicapped.

A number of researchers have used nonhandicapped peers to increase the handicapped child's appropriate play skills and language usage. Guralnick, in a series of studies (1976; 1977; 1980) was able to increase the handicapped children's language usage (Guralnick, 1976), and found that nonhandicapped children adjust their speech according to the developmental level of their peers (Guralnick; Paul-Brown, 1977; 1980). In both structured and free play settings, nonhandicapped children tended to divide the handicapped into two groups: mildly handicapped and moderately/severely handicapped and adjusted their speech accordingly. These modifications were more sophisticated than mere reduction, i.e. less speech. They included a proportionately appropriate variety of speech forms, as well as adjusting their verbal interactions to be consistent with the communicative goal of the speaker and social roles of the participants.

Furman(1979) found that one to one peer contact with younger children increased the social activity of withdrawn children. Dyadic contact with same age children also led to increased social activity, but less than with younger children. The intervention altered the isolate's reinforcement rates. Reinforcement rates were tripled among subjects who interacted with younger children and doubled for children interacting with same age peers. The authors suggest the play sessions provided isolates with the opportunity to be "socially assertive", that is, direct, when these socially assertive behaviors were more likely to be successful.

Researchers such as Snyder, Apolloni & Cooke (1977) have specified in more detail the critical components of peer imitation with handicapped children. Imitation is facilitated by structuring situations where handicapped children observe peer models, and receive positive reinforcement for performing desired behaviors. Further, a program for generalizing imitation must be included whereby imitative behavior learned in a one to one situation will generalize across stimulus situations to responses never directly trained. The nonhandicapped children also have to be trained to be effective reinforcing agents. They need to learn those aspects of the handicapped child's behavior that should be reinforced and how to dispense social and material reinforcers on a contingent basis. These same authors state that reciprocal peer imitation may be necessary for the development of friendship between retarded and nonretarded children . Nonhandicapped children do not spontaneously imitate the handicapped children, hence peer imitation training must be aimed at both groups of children if increased reciprocal imitation is to occur. Particularly if you use imitation by nonhandicapped peers to establish joint activity routines or turn taking. In addition, increasing the handicapped child's peer reinforcement value can also contribute to reciprocal imitative behaviors. Raver, Cooke and Apolonni (1978) found that two retarded toddlers taught to reliably imitate normally developing peer models, by and large retained their trained imitative repetoires under altered environmental situations (structured, not free play).

Gresham (1981) concurs with Snyder et al (1977) in stating that special children need to receive social skill training to increase positive social interaction, decrease negative social interaction, and enhance their social acceptance by nonhandicapped peers. He conceptualized social skill deficits along three dimensions: (1) skill deficits, best remediated through live modelling, (2) performance deficits, best remediated through reinforcement (controlling antecedent and consequent contingencies), and (3) self control deficits, best remediated through cognitve behavior modification. He feels studies examining the impact of social skills training in integrated settings are inadequate along a number of dimensions: a lack of theory regarding which social skills need to be selected, and their subsequent impact on the handicapped child's personal relationships; a lack of adequate evidence concerning the impact social skills training on "socially valid" measures of social competence; deficient evidence on maintenance and generalization; inadequate attention being paid to improving the nonhandicapped child's interaction; and lastly, which techniques are sucessful with which types of handicapping conditions.

D. Attitudes toward Handicapped Individuals

The second broad area of research in integration relates to the claims that early integration fosters the development of more positive attitudes towards handicapped peers that will continue into the child's adult life. Further, the increased positive attitudes of the children combined with the more positive attitudes of the adults connected with the program will, hopefully, contribute to a much more accepting attitude towards handicapped individuals by society as a whole. When one reviews the research in this area, however, one is struck by the lack of empirical support for these claims. Most research merely describes the anticipated benefits of integrated placement. Bricker and

Sandall (1979) are typical in this regard. They state that peers interacting with handicapped children prior to the emergence of negative attitudes promotes tolerance, understanding and an opportunity to learn about each other. The attitudinal benefits of integration are based on three assumptions: one, that nonhandicapped children have not yet developed any negative attitudes toward the handicapped; two, that integrated programs will facilitate the development of positive attitudes towards the handicapped; and three, that these positive attitudes will continue into the child's adult life. These remain three very large and virtually unproven assumptions. Research in this area becomes particularly important in view of the disappointing, but consistent finding that integration at the school level has not led to more positive attitudes toward handicapped pupils (Corman & Gottlieb, 1977; Iano et al, 1974; Gerber, 1977; Reese-Dukes & Stokes, 1978; Goodman, Gottlieb, & Harrison, 1972).

Gottlieb, who has been a leader in this area, examined the factors that affect attitude formation towards handicapped peers. In a 1977 study, Siperstein and Gottlieb found that competent, physically nonstigmatized children were rated more favorably than less competent, physically stigmatized children. Girls had significantly more positive stereotype of a competent male target, but boys were more willing to be in close proximity. Further, popular children rated an attractive and competent child less favorably, whereas, popular children rated an attractive less competent child more favorably. Siperstein and Gottleib's study demonstrated that characteristics of the person in whom the attitude is developing is important. Just what those characteristics are is not clear. Goodman, Gottlieb, and Harrison (1972), for example, found that on a sociometric questionnaire, younger subjects were more accepting of EMR students (integrated and segregated) and boys were more overtly rejecting than girls. Peterson (1975), however, found that older students were more accepting of handicapped students. Corman and Gottlieb (1977) have suggested that acceptance of handicapping conditions may be U shaped function, i.e., high in lower elementary and preschool, sinking to its lowest point in grades 5 and 6, and ascending again as the child moves to adulthood.

Two studies attempted to determine the age at which children become aware of limitations imposed by handicapping conditions. Jones (1967) in a study of 152 preschool children (aged 3,4,and 5 years) found that 4 years was the age at which children began to perceive limitations imposed by physical (orthopedic) disability. Gerber (1977) in an extension of the Jones study, examined the attitudes of nine nonhandicapped childen, aged 3 and 1/2 to 5 years, toward three handicapped peers. He examined the awareness of difference and degree of social acceptance using a sociogram. He found that the nonhandicapped children were aware of differences, and the degree of awareness followed the severity (visability) of the disability. He also found that there was a greater degree of rejection towards the handicapped children than acceptance. Gerber concludes that we need to examine the developmental processes whereby exceptional children are seen as different, as well as the effects of teacher attitudes, curriculum, and family attitudes on attitude development in young children.

Richardson (1976) makes some tentative generalizations about attitudes and behavior toward physically handicapped individuals. Initial reactions to those who are physically handicapped are less favorable than towards those who are not handicapped. There is considerable agreement among subcultures as to which physical handicaps are more or less preferred. Emotional arousal and anxiety occur in varying degrees in an initial encounter with a handicapped person. Richardson states these reactions are present early in childhood, and may stem from what he calls 'violation of expectation', that is, handicapped individuals violate our expected norm in terms of physical appearance. The obvious but unproven implication for early childhood programs is that the earlier in life, and the broader the range of different people an individual has experienced, the less will be the likelihood of a violation of expectation. However, as Donaldson (1980) points out, whether or not eliciting more positive attitudes towards handicapped individuals results in subsequent behavior change or has long term effects needs further exploration.

An additional complication in the whole area of attitude research lies in the lack of appropriate instruments. Many researchers (Guralnick, 1981; Sigler et al, 1978; Dunlop, 1980; Asher et al, 1979) have pointed to the difficulty in obtaining reliable insights into affective and attitudinal process of young children using sociometric choice procedures and other attitude assessments. Dunlop and her colleagues (1980) found a sociometric choice instrument unreliable on repeated administration with preschoolers. Sociometric rating scales have been found to be more sucessful with older children. Asher et al (1979) therefore, compared a peer nomination type of sociometric technique (sociometric choice) with a sociometric rating scale adapted for preschoolers and found the latter to also be more reliable in detecting preschool peer preferences.

In summary, it appears that the impact of integrated programming on attitude development in young children is very much an unresolved issue. Research has been sparse, inconsistent, and full of methodological difficulties.

E. Programmatic Features of the Integrated Preschool

Whereas the previous two areas of research have focused on outcome measures associated with integration, the last body of important research centers around the "how to" or the process, of implementing an integrated preschool program. Relevant variables in this area are numerous(Guralnick, 1981), but relatively unexplored.

Frequently mentioned variables include type of program (curriculum model), teacher training, staffing patterns, child variables such as type of handicap and ratio of handicapped to nonhandicapped children, and parental involvement. There are few studies, however, that have attempted to specifically isolate any of these dimensions, and most often information on these issues comes as additional input from studies examining other issues (Peterson and Haralick, 1977).

Most researchers seem to agree that a specific curriculum model is not the issue, but rather what is needed is a theoretically sound and dependably structured curriculum (Allen, 1980; Karnes, 1979). Some (Meisels, 1977) feel individualized instruction,ie, specific goals and strategies referenced against the child's ability, is a must. Others (Fink and Sandall, 1978) feel that individual tutoring did little to improve handicapped children's functioning in an integrated setting. These authors found that small group, integrated academic instruction, (DISTAR programs) was feasible and beneficial for both handicapped and nonhandicapped children.

Vincent et al (1980) stressed the differences between special and regular early childhood programs. Regular kindergartens are characterized by greater use of teacher directed large group activities than special programs. The regular kindergarten teacher uses less teacher-directed small group activities and more child directed small group activities. Regular kindergarten provides less one to one instruction than special education and demands that children perform and learn with less adult supervision and reinforcement. Traditional special education on the other hand uses techniques that stress precision of cues, precision in definition of acceptable child responses, and precision and consistency in reinforcement of child responses. The integrated classroom attempts to combine the best of these two orientations.

It is felt by many that the teacher is the key to providing this 'blended' classroom experience. It is also generally agreed, although little researched, that preschool teachers' attitudes are more favorable toward integration than teachers in the upper grades (Larrivee & Cook, 1979), and therefore, attention can be focused on skill development rather than positive attitude development. Meisels (1977) feels the skills needed by the teacher in the integrated classroom are extensive: it is assumed that the teacher has the fundamental teaching competence in the regular classroom. Further, based on the differences between special and regular education described by Vincent et al (1980), it is important that the teacher's skills incorporate both early childhood and special education competencies. That differences exist in teacher behaviors in the regular versus special class is demonstrated by a study by Pastor and Swap (1978) in which they compared the behavior of emotionally disturbed preschoolers (4) in regular and special class. The children displayed more disruptive behavior in regular class, and the behaviors of regular and special class teachers differed. The special class teachers interrupted more, explained more, and were present more during activities. The authors say this may be related to the smaller ratios usually found in special classes. They concluded that the teacher's presence helped in structured, teacher directed activities (children were less disruptive), but not during unstructured child organized activities.

Unfortunately, many teachers feel unprepared and negative toward teaching in an integrated program. Gickling and Theobold (1975) cited in Crisci (1981) reported that 85% of teachers surveyed felt they lacked the necessary skills for teaching handicapped children. Childs (1981) more recently surveyed 200 regular teachers teaching in mainstreamed classrooms at all levels and found that only 38% supported the concept of mainstreaming, and they generally felt unprepared and unsupported.

The need for both inservice and preservice training programs is apparent. A plea for integrated preservice training was made earlier in this paper (Doris and Sarason, 1979). Meisels (1977) suggests the following as important competencies for the teacher in an integrated program: a knowledge of normal growth and development in the young child, training and practice in working with children who have a variety of handicapping conditions; skill in analyzing developmental tasks and engaging in step by step programming to individualize programming for the handicapped child, and the ability to work with special disciplines so that program content can be matched to the child's developmental needs.

There is probably no ideal ratio of handicapped to nonhandicapped children within a program. The federal mandate for Headstart in the U.S. is that 10% of the children enrolled must be considered handicapped. There is a general feeling in the literature, however, that having only one child in a program has some disadvantages. These concerns centre on the fact that the handicapped child's differences will be accentuated, and that having only one handicapped child fosters a stereotyped view of all handicapped young children. Further, some feel the handicapped child will feel isolated and segregated. Interestingly enough many of the studies which demonstrated positive interaction between the handicapped and nonhandicapped children had high proportions of handicapped children. In some the handicapped children outnumbered the normally developing children (Peterson and Haralick, 1977).

The last, but seldom researched programmatic feature is the effects of integrated preschool programs on parents. Blacher-Dixon et al (1981) and Allen (1980) point to this as an important area for future research. Potential issues for future consideration include: factors influencing parental value systems towards integration, the resolution of conflict between the child's best interests and the parent's best interests, preparation of parents (of handicapped and nonhandicapped children) for integration, the relationship of positive effects of integration on parents to sucessful child outcomes, and the relationship between parental values and placing a child in an integrated setting. Roopnarine and Lamb (1980) for example found preprogram differences in parent-child interactions in children who attended a nursery school versus those who did not attend). In conclusion, parental involvement (Karnes, 1979) is important because it provides an ongoing system that reinforces and sustains the effects of the program in the child's natural environment.

F. Summary

Integration, thus, as an educational alternative to segregated class placement for young handicapped children has been proposed on the basis of a number of positive outcomes centering largely on benefits to the handicapped child (academically, socially, and behaviorally) and attitudinal gains to their nonhandicapped peers. A review of the literature reveals, however, that support for most of these outcomes is preliminary at best, and nonexistent at worst.

By far the largest body of research has examined the interaction that occurs between the handicapped child and their normally developing peers. This interaction was felt by many to be a measure of true integration, and was considered to be the most important dimension of integration that is unavailable in a segregated setting. The importance of interaction between the two types of children is based on the premise that the handicapped child can improve his academic, behavioral and social skills by imitating his nonhandicapped classmates. The literature suggests that mere physical proximity is inadequate, however, and that some very specific strategies are necessary to make this premise a reality. Most studies found, for example, that although handicapped children were more socially active in hetereogeneous settings this interaction was primarily directed at the adults in the setting or other children with similar characteristics as themselves. Further some researchers (Sinson & Wetherick, 1981) found that handicapped children were isolated, and even rejected and that this rejection increased over time (Simon & Gillman, 1979; White, 1980). Encouraging beginnings have been made by people such as Guralnick (1976,1977,1980); Synder et al (1977) and Gresham (1981) in identifying those aspects of both the model, the imitator, and the modelling context which can maximize the handicapped child's ability to imitate. Unfortunately, much of this work is still experimental in nature and could not be considered part of the standard teaching repetoire of early childhood teachers.

The claims that integration positively influences the nonhandicapped children's attitudes remains largely unsubstantiated. Studies that specifically examined this issue are few, and those that exist are complicated by methodological difficulties. Further, there is little evidence that early integration effects attitude development over the long term or that positive attitude development if achieved leads to important behavioral consequences.

A small body of research has sought to identify those parameters which are most important for successful integration. Although there is much work still to be done, there appears to be some agreement among researchers that staff and type of program, child variables, particularly type of handicap and ratio of handicapped to nonhandicapped children, and parental involvement are the most important elements for sucessful integration.

The literature seems fairly clear in pointing out the directions that future integration research should take. These form the basis of the rationale for this study, and will be translated into specific research questions in the next chapter.

III. RATIONALE AND RESEARCH QUESTIONS

Although noone has considered the integration process in its entirety, when one considers the full spectrum of research undertaken it becomes clear that certain dimensions are considered to be critical. The first of these dimensions is the nature of the interaction between the handicapped children and their nonhandicapped peers. The second dimension is the impact of integrated programming on the attitude development of the nonhandicapped children within the program. The third broad dimension is those program features which facilitate or maximize the integration experience. There is an important qualitative difference between the first two dimensions to be considered, and the third. The interaction patterns and attitude development dimensions explore anticipated outcomes of integration. Program features, on the other hand, encompass a whole host of factors that are felt to facilitate the successful implementation of an integrated program. The three are intertwined, however, in that without a successful program, incorporating those desired program features described in the third dimension, it is unlikely that the desired outcomes of dimensions one and two will be forthcoming.

In examining the integration experience of handicapped children in Alberta preschools, these three dimensions were explored. Initially, however, important descriptive information was collected on the nature of the handicapped children and their families. Specifically, demographic information on the children and their families, and diagnostic and general functioning of the children were reviewed.

The data collected in this research, therefore, related to four specific aspects of integration: the nature of the children and their families currently enrolled in integrated programs; the interaction patterns of these children and their nonhandicapped peers; the attitude development of the nonhandicapped children towards their handicapped peers; and program features of the integrated preschool. The specific questions addressed in each of these areas are outlined below.

A. The handicapped child and his family

1. What are the demographic characteristics of handicapped children and their families currently integrated in Alberta preschools?
2. What is the nature of their handicapping conditions?
3. What is the functioning level of these children? What instruments are available for this particular group of children?

B. Interaction patterns: handicapped children, peers and teachers

1. What are the major characteristics of the handicapped children's interaction patterns within integrated settings? Specifically, what types of specific behaviors and play activities are most often displayed, and with

whom in the classroom does most interaction take place?

C. Non-Handicapped peers: attitudes

1. What is the nature of the nonhandicapped children's attitude toward the handicapped?
2. Is the Social Acceptability Apperception Test (S.A.A.T.) assessing preschool children's attitudes towards their handicapped peers?

D. Program characteristics

1. What are the salient characteristics of integrated preschool programs in Alberta with respect to:
    a. general program characteristics - group size and ratio of handicapped to nonhandicapped children?
    b. staff and programming characteristics - staff views and attitudes toward integration; personnel preparation; specific instructional programming for the handicapped child?
    c. parental involvement - how are parents currently involved in programs and how satisfied are they with their children's placement in an integrated setting?

The instruments and procedures used in addressing these questions are described in the next chapter.

IV. METHOD

A. Participants

The children and centres involved in this study were solicited from day care and Early Childhood Services (E.C.S.) programs throughout Alberta. Children were designated as subjects in the investigation if they had been identified by the program staff as requiring additional assistance to function within their respective settings. Further most programs were in receipt of additional funds to assist in the provision of any special programming required. Children in E.C.S. programs received funding through category A or Program Unit Grant designation, while day care children were funded through the Integrated Day Care Program.

The sampling procedures for the day care and ECS groups differed substantially. An attempt was made to gather information on children currently integrated in Alberta day cares under the Integrated Day Care Program. This was done through the Child Development Specialists in each area. These individuals were responsible at this time for supervision of children funded through the Integrated Day Care Program. A sample of the questionnaire used to gather information from the Child Development Specialists is shown in Appendix A. Upon receipt of these questionnaires, the children were randomly selected for the sample in order to match the known distribution of special needs children integrated in rural(40%) and urban(60%) day care programs; as well as to include a variety of handicapping conditions.

This approach was not feasible with ECS programs for a number of administrative reasons. ECS programs were identified by offcals within the provincial ECS branch, and the Edmonton Public and Catholic School Boards. As with the day care sample, an attempt was made to match the known distribution of special needs children integrated in ECS programs(40% rural, 60% urban); as well as to include a variety of handicapping conditions. Due to the difficulty of obtaining urban ECS children for the sample, however, there is a higher percentage of children from rural ECS programs than found in the provincial population.

As a result of these criteria, 65 children from 31 programs were involved in the study. Within daycare programs, 21 urban children in 9 programs and 12 rural children in 4 programs were involved. In ECS programs 16 urban children in 11 programs and 16 rural children in 7 programs were selected. Urban centres included Calgary, Edmonton and Red Deer whereas rural centres were from several locales throughout the province. Demographic characteristics of the children will be presented in the results section.

B. Design

Program evaluation/analysis is always a complicated issue in education, but evaluation/analysis of integration as an educational process is particularly complex because it involves the domains of both early childhood education and special education. Effective educational strategies in both of these fields remains very much an unresolved issue.

It is beyond the scope of this research to identify parameters of early childhood programs in terms of educational quality. The focus rather is on the provision of an appropriate (quality?) educational experience for the handicapped child, and the identification of those aspects that contribute to this positive experience. Further, as integration accomodates children with diverse handicapping conditions, the aspects (parameters) identified must be flexible enough to incorporate the various unique needs of each.

What kind of approach/model can be used for examining and isolating the important aspects of integration? According to Rossi et al (1979) evaluation research may be the appropriate tool for purposes of this study. They define evaluation research as "an area of activity devoted to collecting, analyzing, and interpreting information regarding the need, implementation, and impact of intervention efforts aimed at bettering the lot of human kind and improving social conditions and community life." There are two widely accepted types of evalulation research:

summative and formative. Summative evaluation research has been described as the use of research procedures for determining the "success" of a program in reaching its stated goals or producing expected effects. According to Rutman (1977) evaluation of program effectiveness assumes the presence of certain preconditions: (1) the program is clearly articulated; (2) the goals and/or expected outcomes are clearly specified; and (3) the causal assumptions linking the program to the goals and/or outcomes are plausible. These preconditions should normally be developed through program planning and development. Finding programs, however, where these preconditions exist is rare. These preconditions combine to produce a program model; such a model is clearly absent in the case of integration.

Hughes et al (1981) state that in the absence of a model, the implementation of a process assessment is more descriptive, emphasizing the documentation of what has(is) transpired. They suggest this can be done through (1)participant observation, (2) structured and unstructured interviews, and (3) the use of administrative records. This type of process assessment is what most researchers would call formative evaluation. Formative evaluation is aimed at discovery and relies heavily on an inductive approach. It is the study of a program that affords a learning opportunity with research used as a tool for collecting data to assist in the conceptualization and operationalization of a program, its goals and effects, and the assumed causal relationships between the two. Formative evaluation in contrast to summative, places heavier reliance on "soft" approaches to data collection (unstructured interviews and observation) and measures used (attitudes, opinions, etc.) During this period it is appropriate to refine the approaches and measures used through practise.

Rutman (1977) identifies three major types of information to be collected during a formative evaluation: (1) program activities, and the existence of an "idealized" program. To contribute a better understanding of a program, formative research collects data on program personnel, organizational structure and climate, policy, and context within which the program operates. In the area of program personnel, some of the following factors may be considered relevant: demographic characteristics, type of training, work experience, particular attitudes, etc. Relevant questions with regard to organizational structure and climate include hierarchtical levels, span of control, size, compexity and centralization of authority. Policy issues focus on the way the program implements policy, and context variables relate to the environmental realities within which the program functions. (2)identification of program effects; both publicly stated as well as latent goals. Also side effects (i.e., unintentional) can be identified by using the literature or other research. (3) exploration of the "problem" the program attempts to solve. Programs make implicit and/or explicit assumptions about the cause of the problem being addressed. These assumptions may be highly questionable, and therefore it is important to examine the stated "problem" in order to validate these assumptions. For example, it is important to identify the population which the program serves, and thus demographic data are required. Specific and detailed information should be collected about the needs or problems which the program addresses. As well it is important to know whether the program is serving those most in need.

Given the current status of integrated preschool programs in Alberta, it would appear that a formative evaluation approach provides us with the most appropriate framework to investigate the important dimensions of integration as previously identified. A formative approach provides valuable direction both in terms of information to be collected and in the selection of data collection devices to be used.

C. Instruments

In order to investigate each of the integration dimensions outlined, several types of assessment devices were employed. The handicapped children's competencies were initially assessed with the McCarthy Scales of Children's Abilities (McCarthy, 1972). If the child was found to be functioning at a low level on this device (greater than 1 standard deviation below the mean) a criterion referenced assessment device was also employed. The Preschool

Observation System was used to monitor the children's interaction patterns; while, the Social Acceptability Apperception Test (Berger,Hillyard, and Kozak, 1979) was used to identify attitudes of the nonhandicapped peers towards the handicapped. Finally, several questionnaires were developed for use with parents of the handicapped child, the teaching staff and aides in each program.

The McCarthy Scales of Children's Abilities

The McCarthy Scales of Children's Abilities (McCarthy, 1972) are a series of normative tests designed for use with 2 1/2 to 8 1/2 year old children. The tests provide a measure of the child's general intellectual level as well as strengths and weaknesses in five developmental areas. Norms for the McCarthy were developed by assessing approximately 100 children at each age level. As well, validity was established by comparing children's scores on the McCarthy with other already established instruments such as the Stanford Binet (r=.81 with McCarthy G.C.I.) and the Wechsler Preschool and Primary Scale of Intelligence(r=.62 to .71with three WPPSI I.Q scores).

The five scales of the McCarthy Test are as follows: Verbal, Perceptual-performance, Quantitative, Memory, and Motor. The scores from the Verbal, Perceptual-performance and Quantitative Scales are combined to give the General Cognitive Index, an indication of the child's general intellectual functioning. This score reflects the child's ability, in comparison to other children of the same chronological age, to integrate present knowledge and generalize it to the tasks in the Scales.

Criterion-Referenced Assessment

The criterion-referenced assessment format provided a behavioural assessment of the student's knowledge in five developmental areas. These developmental areas include: communication (receptive and expressive), pre-academic skills, motor skills, self help, and social skills. Unlike normative assessment (e.g. the McCarthy Scales) which compare one child's performance against other children's performance, the criterion-referenced assessment compares the child's performance to an established external standard or criterion on each item. The meaningfulness of this assessment, therefore, is in relation to whether the individual child can or cannot meet the standard. In addition this assessment format used a sequential introduction of prompts and guidance, such that information was provided with regard to the degree of intervention necessary in order to obtain a response from the child for any particular item. This information was directly applicable to teaching methods which may subsequently be employed by program staff.

The criterion referenced assessment device used in the present study was developed for the assessment of moderately to severely handicapped persons and contained a total of approximately 230 individual items across the five assessment areas(White, 1978).

Preschool Observation System

The Preschool Observation System (P.O.S.) was designed to measure the social interaction of handicapped children within integrated preschool settings.

The P.O.S. was designed following a survey of existing observation instruments. It was piloted by three research assistants at the Student's Union and Community Day Care over a two month period. During this time, a number of items were added, deleted or changed. The final version of the P.O.S. is described below.

The handicapped child's interaction with nonhandicapped peers, with handicapped peers, and with teachers was recorded. An analysis was made of the interaction patterns established between the handicapped child and others in the preschool environment (nonhandicapped children, and adults) regarding initiation and receipt of verbal and physical interaction, reinforcement of interchange, and modelling of appropriate social/language behavior. In addition to these specific behaviors, the P.O.S. provided information regarding the types of activities most frequently engaged in by the handicapped child.

The interactive behaviours of the handicapped child were recorded by a trained observer through the use of a set of codes and an automated data recording system. The specific behaviour codes and activity categories are listed in Table 1. Definitions for each are included in Tables 2 and 3.

TABLE 1

BEHAVIOUR CATEGORIES FOR MORE RECORDING

Non-Handicapped Peer

Code
01. Initiate verbal interaction to peer
02. Receive verbal interaction from peer
03. Imitates peer
04. Provides positive reinforcement to peer
05. Receives positive reinforcement from peer
06. Reprimanded by peer
07. Initiates motor-gestural interaction to peer
08. Receives motor-gestural interaction from peer
09. Initiates physical/verbal aggression to peer
10. Receives physical/verbal aggression from peer

Handicapped Peer (H.P.)

21. Initiate verbal interaction
22. Receives verbal interaction
23. Imitate H.P.
24. Provides positive reinforcement H.P.
25. Receives positive reinforcement H.P.
26. Reprimand by H.P.
27. Initiates motor-gestural interaction to H.P.
28. Receives motor-gestural interaction from H.P.
29. Initiates p/v aggression H.P.
30. Receives p/v aggression from H.P.

Teacher

11. Initiate verbal interaction t teacher
12. Receives verbal interaction from teacher
13. Imitates teacher
14. Provides positive reinforcement to teacher
15. Receives positive reinforcement from teacher
16. Reprimanded by teacher
17. Initiates motor-gestural interaction to teacher
18. Receives motor-gestural interaction from teacher
19. Initiates physical/verbal aggression to teacher
20. Receives physical/verbal aggression from teacher

Other

31. Models for peer
32. Models for teacher
33. Models for handicapped peer
34. Compliance behaviour

Observation Situation Code

Play Conditions

01. non-social
02. isolate
03. on-looker
04. parallel
05. cooperative

Other Conditions

06. group instruction
07. individual instruction
08. unable to record

TABLE 2

BEHAVIOUR CATEGORIES: DEFINITIONS

Verbal reinforcement - includes questions, demands, and social conversation, responses.

Positive reinforcement - facial expression, physical contact, pat, hug, smile, tokens, having requests, or demands met, verbal praise, use of materials requested by child.

Reprimand - gestural or verbal reproof, scoldings, directions or admonitions to stop negative actions or behaviour and change to more positive actions.

Motor-gestural interaction - all movement that cause body contact with body of another child or teacher; waving or extending arms directly to another child or teacher; touching materials or toys being touched or held by another child or teacher.

Agression - hitting, beating, kicking,pinching, destroying, taking things belonging to others, threatening, bothering, can include verbal or physical aggression.

Compliance behaviour - follows instructions, complies to requests made by other children/staff.

Imitation - demonstrating a response similar to one emitted by another child, previously observed by the target child. The imitated behavior may be that of a handicapped or nonhandicapped peer or a teacher.

Modelling - displaying a behavior that is subsequently imitated.

TABLE 3

ACTIVITY CONDITIONS: DEFINITIONS

Non-social - not attending to or participating in social educational activities, nor involved in appropriate solitary play. Engaged in non-constructive, non-directive, unoccupied activities, self-stimulation, or inappropriate use of material.

Isolate play- playing apart from the group, making no effort to physically or verbally join group, not concerned with what others are doing.

On-looker- spectator, visually attending to group, maintaining visual attention but not participating physically.

Parallel play- playing with his/her own materials beside or facing another child; children are in close enough proximity to allow for observation of each others' activities (within 3 feet and in the same play area).

Co-operative play- playing with others,organization with common goals, mutual participation, working together, could include games and drama organized by children.

Group instruction- teacher or aide presenting information through direct instructions or indirect methods (provision of materials) to more than 2 individuals.

Individual instruction- target child only.

Unable to record - out of room

The Data Collection Device: MORE

To facilitate the analysis of the large volume of data involved in a study of more than 50 preschool handicapped children the Integration Study employed an electronic data collection system. The MORE, a product of Observational Systems Incorporated, Seattle, Washington, is a portable electronic data collection device with a built-in duration timer yielding an automatic time base. It has adequate storage capacity (9600 data characters) for a large amount of data and allows transfer of data from it to a cassette tape for storage.

The Social Acceptability Apperception Test (S.A.A.T.)

The S.A.A.T. is a projective test designed for school children in kindergarten to grade six. According to the authors (Berger, Hillyard, and Kozak, 1979) the S.A.A.T. was developed as a set of instruments through which a child's attitudes towards handicapped children can be indirectly observed. For younger children (kindergarten to grade 3) the S.A.A.T. used a drawing task which asked the children to draw themselves, a friend, and a handicapped child playing at recess time. The drawings were then scored for the presence or absence of certain characteristics (presence of helping relationship toward handicapped, physical sign of handicap, figure size, figure detail and emotional expression) or configurations (proximity of figures to each other, figure arrangement).

Questionnaires - Parent, Teacher, Aide

A. Parent questionnaire

The parent questionnaire was developed by the present author in order to assess the parents' perception of their child's participation in an integrated preschool program. The original draft of the questionnaire was piloted with the staff of the Student's Union and Community Day Care on the University of Alberta campus. Following receipt of their feedback, the parent questionnaire was modified to its final form which is described below. The parent questionnaire was divided into three parts: I -Family information- This section provided some general information on the socio-economic status of the families in the sample, as well as family constellation, and geographic stability.

II -Diagnostic Information- This section provided information regarding the parent's perception of their child's special needs, as well as how they first became aware of these needs and how these needs may have changed since the original diagnosis.

III -Educational Information- This section explored the following areas:

1. child's present program and previous participation in group programming;
2. parents' perception of child's emotional responses towards school;
3. familiarity with program;
4. parents' satisfaction with child's individual program;

5. parents' involvement in the child's program;
6. suggestions from school for use at home, and conversely, responsiveness of school to suggestions from parents for use at school;
7. adequacy of communication with teacher;
8. adequacy of communication with other parents;
9. ways school could be more helpful;
10. adequacy of support services outside school;
11. effects of integrated program on child's functioning outside of school.

B. Teacher questionnaire

The teacher questionnaire was also developed by the author and piloted with the Student's Union and Community Day Care staff. It was hoped this questionnaire would tap a number of issues felt to be crucial to the integration process.

The following items were addressed in the teacher interviews:

1. existence of a planning process with regard to placement of handicapped children;
2. emotional attitude of teacher towards integration;
3. use of support services, primarily aides;
4. training - identification of pre-training or inservice received;
5. adequacy of training and identification of needs in this area;
6. individual programming for children, on a general level

and planning-who provides program;

7. planning-what does it encompass;
8. implementation and consultation - who is available for consultation in above areas;
9. specific information regarding individual programming for children - individual programming, inclusion in total program, limitations of handicapped child, teaching strategies for concepts and skills, generalization, and socialization.
10. description of child's present interaction patterns, presence of behaviour problems, measuring progress - how often (frequency)
11. description of parental involvement;
12. identification of needs;
13. means of meeting these needs;
14. advantages of integration.

C. Aide questionnaire

The purposes, development and administration of the aide questionnaire were identical to those of the teacher questionnaire with the exception of Items 1, 2 and 3 which were omitted. It was intended that Item 9, which dealt with the specifics of the child's individual program, would only be completed by the person planning and implementing these programs for the handicapped child. This person varied from program to program, however, and was therefore included in both the teacher and the aide questionnaire.

D. Procedures

General procedures

As much as possible, in person contact was made with each program before data collection began. During these visits the various aspects of the study were discussed with program staff and the various instruments to be used were explained. The issue of parental consent was clarified and parental permission letters were left with staff to be circulated immediately preceding the first visit. When prior in person contact was not possible due to time or distance constraints, the same procedure was followed over the telephone and parental consent letters were mailed. In some instances, the initial in person contact was made with several programs at once. In any event, some type of contact,either face to face or telephone, was made with programs prior to the onset of data collection. Parental consent was also obtained by letter before data collection began.

Data collection was done by a team of trained researchers. As the data collection phase extended over an 18 month period, the specific individuals changed from time to time, however, consistency in procedures was insured by the project co-ordinator who remained the same throughout. Most of the researchers were university graduates, and many had previous related experience with handicapped children. Despite the fact that it was necessary to use a number of different individuals to collect data during the course of the study, a concerted effort was made to insure the data collectors were well trained and reliable. Particular attention was paid to insure that observers using the P.O.S. had obtained inter-rater reliability of at least 75% before data collection began. The Student's Union and Community Day Care were most cooperative in allowing our research staff to train on the various instruments used in the study. Friend's children were also used in an effort to learn instruments such as the McCarthy and the criterion referenced assessment device. Also, if possible, research staff were chosen who were already familiar with many of the instruments to be used.

With the exception of the parent interviews, all other forms of data were collected within the program setting. A standard sequence was followed in the administration of the instruments. Usually two visits to the program were required to collect all types of data. The Preschool Observation System was administered first, as it was felt prior administration of the other instruments could contaminate the behaviour sample. Next the McCarthy Scales were administered to the handicapped child. This was usually all that was possible during the first visit. At the time of the first visit the teacher and aide questionnaires were left with program staff, unless they had already been left at the time of the initial program contact.

During the second visit the criterion referenced assessment was administered to the handicapped child if necessary, and the teacher and aide questionnaires were collected. The S.A.A.T. was administered at the most convenient time for the teacher either on the first or second visit. Parent interviews were conducted separately either in the family home or in the program setting, whichever was mutually convenient for the parent and the interviewer.

Specific procedures for each of the instruments are outlined below.

The McCarthy Scale of Children's Abilities

The McCarthy was administered by a trained examiner in a quiet area of the day care/ECS environment. Test administration was performed according to the standardized instructions given in the test manual.

The Criterion Referenced Assessment Device

The C.R.A. was also administered by a trained examiner in a quiet area within the ECS or day care setting. For each item, standard wording and standardized materials were specified to assess each individual objective.

The Preschool Observation System

A thirty minute sample of the handicapped child's interaction within the classroom was obtained using the MORE. In most instances, data were collected on the same day consisting of 3, 10 minute observation segments. An effort was made to select observation segments in which interaction was both possible and representative. Free play was often found to best resemble this situation. The behaviours were coded continuously for 2 minute time blocks, while the general play conditions were recorded continuously. This was accomplished by the use of a set of toggle switches which measure time elapsed for the specific play conditions.

MORE data was collected by a number of research team members. All were trained in the use of the MORE and the observation system until reliability of data collection reached or exceeded 75% inter-rater agreement within the day care or ECS setting.

The S.A.A.T.

The S.A.A.T. was administered by the teacher to the entire group of students using a standardized set of instructions. The researcher was present during the test administration and children were instructed to give their completed drawings to her. At this point the examiner asked the child to describe the drawing and the child's responses were recorded. This was necessary for the scoring of the drawing which was to be done later.

Questionnaires

Generally speaking, teacher and aide questionnaires were left at the time of the first contact between the research team and the program staff. On a subsequent occasion the researcher collected the questionnaire, quickly reviewed it, and queried any unclear responses. Parent questionnaires were administered to one or both parents during a personal interview. Interviews were held either within the program setting or in the parents' home whichever was most convenient for parents and researchers. The parent questionnaire was usually the final item in the data collection process.

E. Reliability

Despite efforts to use well trained and skilled data collectors, the necessity to use a large number of individuals for this purpose over the course of the study made reliability a continuing concern. There was a particular concern about the observations collected using the P.O.S. The intention was that reliability data (as measured by having a second observer rate the same behaviors) would be collected on 10% of all observations collected using the P.O.S. Unfortunately, however, reliability data was collected on only 4% of all P.O.S. observations. Inter-rater agreement was defined as the number of occurrence agreements divided by the sum of occurrence agreements and occurrence disagreements. Reliability data was collected by having a second trained observer rate the same child's behaviors during a specified number of two minute time blocks. The beginning of the time blocks were indicated by a timer on the MORE. Whenever possible both observers recorded behaviors using a MORE, however, on some occasions when a second MORE was unavailable, the second observer recorded behaviors on a previously designed coding sheet. The reliability data indicated that inter-rater reliability did not fall below the 75% level established during the initial training period.

Limited reliability data were also collected on the McCarthy, the Criterion Referenced Assessment Device, and the S.A.A.T. In the case of the McCarthy and the Criterion Referenced Assessment Device, this data was obtained by having a second trained examiner score the same child's responses to the test items during the test administration. With the S.A.A.T., the second examiner scored the same children's drawings at a later date. Inter-rater reliability was calculated in the same manner as the P.O.S.: agreements divided by the sum of agreements plus disagreements. None of the inter-rater reliability collected in this manner fell below the 75% level.

V. RESULTS AND DISCUSSION

The results of the investigation will be presented in the order of the research questions posed earlier. Data regarding the handicapped children and their families will be reviewed first; then interaction patterns between the handicapped and nonhandicapped children will be examined;the nonhandicapped children's attitudes towards their handicapped classmates will be considered next; finally, programmatic features of integrated preschools will be summarized and discussed.

In the first and last section, the data has been compared according to the 4 subgroups within the sample: rural and urban ECS programs, and rural and urban day care programs. Data analysis varied according to the type of instrument used and the information collected. Where applicable, specific methods of analysis will be described.

A. The Handicapped Child

Demographic characteristics

The information from the parental interview provided the demographic data presented here. Table 4 presents the children's ages, sex, number of siblings, family income level and the status of the family in terms of one or two parents and the length of time in their present residence. As the table shows, generally the children's ages were 5 1/2 years with the rural day care children being somewhat younger at 4 years 11 months.

TABLE 4

DEMOGRAPHIC DATA OF EARLY CHILDHOOD SERVICES AND DAY CARE GROUPS

Variable	E.C.S.		Day Care	
	Rural (n=12)	Urban (n=15)	Rural (n=11)	Urban (n=21)
Age	$\bar{x}$ = 5yr 5mo $\bar{x}$ M = 5yr 5mo F = 5yr 5mo	$\bar{x}$ = 5yr 10mo $\bar{x}$ M = 5yr 9mo F = 5yr 11mo	$\bar{x}$ = 4yr 11mo $\bar{x}$ M = 5yr 0mo F = 4yr 9mo	$\bar{x}$ = 5yr 5mo $\bar{x}$ M = 5yr 7mo F = 5yr 1mo
Sex	M 62.5% F 37.5%	M 62.5% F 37.5%	M 58% F 48%	M 62% F 38%
No. of Siblings	$\bar{x}$ = 1.83	$\bar{x}$ = 1.73	$\bar{x}$ = 2.2	$\bar{x}$ = .905
Income	$\bar{x}$ = 34,300	$\bar{x}$ = 27,750	$\bar{x}$ = 19,200	$\bar{x}$ = 23,800
Families: 1 parent	0%	13%	18%	38%
Families: 2 parent	100%	87%	82%	62%
Length of time in current residence	$\bar{x}$ = 6.08yrs	$\bar{x}$ = 4.95yrs	$\bar{x}$ = 5.8yrs	$\bar{x}$ = 2.7yrs

$\bar{x}$ = mean

With respect to ratio of boys to girls, generally there was a 60% male, 40% female distribution. The family constellation was similar for both groups of ECS children averaging about 1.8 siblings per family. Rural day care children have slightly larger families with 2.2 siblings whereas urban day care children had substantially fewer siblings averaging .91. The data suggest that the samples were generally similar except for the slightly younger age of the rural day care children and fewer siblings in the urban day care group.

The families' annual income was generally in the $25,000 to $30,000 range except for the rural day care families where the average income was below $20,000. It is interesting to note that the rural ECS families had the highest annual average income of any of the groups. With respect to family status, both urban and rural ECS children had a high percentage of two parent families as did the rural day care group. A higher percentage of single parent families was found in urban day care program (38% single parent families). Family stability is suggested for both ECS groups and the rural day care group by the length of time spent in their current residence. The average stay in their present residence was 5 years for these groups. The shorter length of stay in their current residence (2.7 years) among urban day care families suggests a slightly higher degree of transience in this group.

Parental education level is displayed in Table 5. As the table shows there was substantial similarity in the level of education of the rural and urban groups across both program types. The major difference between the urban and rural groups was a slightly higher level of education for the urban parents than seems to be the case for rural parents. The distribution of occupations for parents across several occupational categories is portrayed in Table 6. As can be seen from this table, the rural group and the urban group seemed to exhibit some similarity across each program. There was a higher incidence of working women in the urban day care sample than among the other three groups and a slightly higher incidence of professional employment in the urban populations. Otherwise, few differences were noticed between the groups in terms of geographical location or program with respect to parental occupation.

Diagnostic Data

The diagnostic data presented in Table 7 was also obtained from the parental interview. Thus, the diagnostic categories and the personnel making the first diagnosis are reported as perceived by parents but were not confirmed by professionals. However, the data do indicate family perception regarding the child's diagnosis and the age at which the diagnosis was identified for them. As can be seen in Table 7, the majority of children fell in the mild to moderate range of mental handicap with a few children exhibiting multiple handicaps and a few children exhibiting

TABLE 5

DEMOGRAPHIC DATA OF EARLY CHILDHOOD SERVICES AND DAY CARE GROUPS

PARENTS' EDUCATION

	E.C.S.				Day Care			
	Rural		Urban		Rural		Urban	
	M	F	M	F	M	F	M	F
Grades 1-9	0%	25%	7%	21%	9%	38%	14%	9%
High School	84%	50%	58%	36%	36%	25%	38%	45%
Vocational School	8%	0%	7%	7%	18%	25%	0%	9%
Community College	0%	8%	14%	21%	18%	0%	29%	0%
University graduate	8%	17%	7%	7%	18%	12%	19%	27%
Post-graduate training	0%	0%	7%	7%	0%	0%	0%	9%

M = Mother
F = Father

TABLE 6

DEMOGRAPHIC DATA OF EARLY CHILDHOOD SERVICES AND DAY CARE GROUPS

PARENT'S OCCUPATIONS

	E.C.S.				Day Care			
	Rural		Urban		Rural		Urban	
	M	F	M	F	M	F	M	F
(1) Self-employed	0%	54%	8%	7%	18%	33%	0%	25%
(2) Professional/	8%	15%	8%	29%	18%	22%	14%	33%
(3) Service prof	33%	0%	23%	36%	9%	11%	62%	8%
(4) Tradesman	0%	23%	0%	29%	0%	22%	0%	33%
(5) Homemakers, students, unemployed	58%	0%	62%	0%	55%	11%	24%	0%

M = Mother
F = Father

TABLE 7

DIAGNOSTIC INFORMATION

Day Care			E.C.S.	
Type of Handicap	**Rural** (n=16)	**Urban** (n=15)	**Rural** (n=12)	**Urban** (n=21)
A. Physical	1	0	0	3
B. Sensory	0	3	1	1
C. Mild mental/psychological	5	10	4	3
D. Moderate/severe mental/psychological	8	2	2	11
E. Multiply handicapped	2	0	5	3
Diagnosis made by: Professional (medical/education)	8	5	8	5
Non-professional (parent/other family member)	8	10	4	16
Age at diagnosis (in months)				
0-3	1	1	4	4
4-6	0	0	2	1
7-9	0	0	0	1
10-12	2	1	0	5
13-24	2	1	0	4
25-36	3	4	1	0
37 mo. & over	4	4	0	1
unknown	4	4	5	5

sensory or physical handicaps such as hearing impairments or cerebral palsy.

The fact that parents (63% in day care sample and 68% in the ECS sample) or a close relative had been the first to notice their child's difficulties was a frustrating experience for many parents. Delays in their subsequent attempts to have the exact nature and prognosis of the condition identified was mentioned by one third of the respondents. Sample comments of responses they received from various medical and related professionals are listed below, while a more complete list is included in Appendix B.

E.C.S.

-"not to worry";
-at 2 1/2 years, parent told by psychologist that child had Downs' Syndrome, parents had thought something wrong;
-after adopting child, and suspecting a problem, told by social worker "to relax"; one year later child found to have hearing loss;
-"pestered" many doctors, not considered bad enough; two convulsions and 1 year later, tests were done

Day Care
- at two noticed language delay, told "not to worry", child diagnosed at three;
-at 15 months parents noticed delay, doctors said "no problem", changed doctors, who referred child for further assessment, told child had c.p.;
- at 11 months noticed slow motor development, parents told child would "outgrow it", diagnosis made when family moved to Calgary;

The fact that the majority of children seemed to be first identified as having some special needs by a non-professional with presumably subsequent professional confirmation of a handicapping condition or special need is interesting. In terms of the child's age at the time of diagnosis, it appears that in the ECS sample children were typically diagnosed after the first year of life whereas in the day care sample more children seemed to be diagnosed during the first year of life. This finding may reflect a number of factors:(1) a transition in our health service systems in that, diagnoses of children's special needs are now being made earlier whereas, the slightly older ECS children were less likely to have been diagnosed so early; (2)uneven availability of professionals in rural and urban areas, for example, there are fewer professionals in rural areas trained to make early diagnoses of handicapping conditions (3) the urban ECS group were mildly handicapped and thus more difficult to detect prior to school entry. It is interesting to note, however, that the types of handicaps and the persons identifying them tend to be fairly similar across the two programs and geographical regions.

Normative Assessment

The McCarthy Scales of Ability were employed to establish the children's general cognitive level. The results of the McCarthy assessments for day care and ECS groups are presented in Table 8. This table portrays the following information for each of the four sub groups of children: average chronological age and range, the McCarthy general cognitive index, the McCarthy memory score and the McCarthy motor score all presented as an age equivalents in years. As well, a ratio of the McCarthy general cognitive index divided by the child's chronological age was computed

TABLE 8

MEANS AND RANGE FOR THE McCARTHY SCALES (GENERAL COGNITIVE INDEX, MEMORY, AND MOTOR AGES), CHRONOLOGICAL AGE, AND THE RATIO OF GCI/CHRONOLOGICAL AGE

	E.C.S.		**Day Care**	
	Urban	**Rural**	**Urban**	**Rural**
	Mean (Range) (n=16)	Mean (Range) (n=15)	Mean (Range) (n=21)	Mean (Range) (n=12)
Chronological Age (CA)-Years	5.88* (5 - 7.2)	5.41 (4.3 - 7.1)	5.40 (3.2 - 9.6)	4.91 (4.2 - 7.5)
General Cognitive Index (GCI) Age equivalent-Years	5.18 (4.0 - 6.8)	4.04 (2.8 - 5.0)*	4.14 (2.5 - 6.8)*	3.76 (2.5 - 5.0)*
Ratio: GCI/CA	0.89	.76	.78	.76
Memory Age Equivalent -Years	4.96 (3.5 - 6.1)	3.76 (2.5 - 5.8)	4.07 (2.8 - 7.4)	3.75 (2.5 - 4.8)
Motor Age Equivalent -Years	4.95 (3.6 - 6.4)	3.84 (2.8 - 4.8)	3.52 (2.5 - 6.3)	3.33 (2.5 - 5.0)

* Some children in group with Age-Equivalent under 2.50 years.

and averaged across the children in each group to give an indication of the students' level of development relative to their chronological growth. Thus, this ratio would approach 1.00 as the student's general cognitive index (expressed as an age equivalent) rose to approximate the child's chronological age.

As can be seen in Table 8, the children's chronological ages are similar except for the slightly younger rural day care group. General cognitive performance was highest for the urban ECS group. The rural ECS, urban and rural day care groups exhibited similar levels of cognitive development. The rural day care group's mean general cognitive index was lower, however, as they were in fact chronologically younger than the other three samples.

The memory and motor age equivalent scores for each group resulted in similar levels of performance. It is note worthy that children's motor development levels were somewhat below the general cognitive development level suggesting a more substantial motor delay than the children were exhibiting in the cognitive development area. The memory scores of the children, however, were closer to their scores on the general cognitive index.

The overall impression from this data suggests that students integrated into these programs exhibited a mild to moderate delay in general cognitive, memory and motor development. In viewing the range provided beneath each mean in Table 8, it is also clear that a substantial degree of variance was present in these groups. The wide range obtained for these scores indicates the wide variability between the subjects within each of these groups.

In order to examine the functioning levels of the respective groups, a median test (Siegel, 1956) using the ratios of GCI/CA for each child were applied to the ECS and day care samples, the urban and rural samples, and within these samples, urban/rural ECS and urban/rural day care. The results showed a significant difference (p<.05) between the day care sample and the ECS sample. There were significantly more children below the mean in the day care sample than in the ECS sample. There was, however, no significant difference between children in the urban programs compared witho rural programs(ECS and day care combined). When the ECS sample was divided into urban and and rural sections, however, a difference was discovered(p<.05). There were significantly more children below the mean in the rural ECS group than expected. When the day care sample was divided, however, there was no difference between children attending urban and rural programs. To summarize, there were a significantly greater number of lower functioning children in day care programs than ECS, and a significantly greater number of lower functioning children in rural ECS than urban ECS programs.

The difference between the urban and rural ECS children is of some substantial interest. Much higher functioning was found for the children in the urban programs than was generally the case in rural areas. This finding may be due to the larger number of specialized programs in urban settings for children with more severe handicapping conditions. However, in rural areas, students must obtain services from available programs such as the community kindergarten which typically are more generic in nature.

Criterion-Referenced Assessment

The criterion referenced test was used to obtain an additional, more sensitive measure of the children's skills and competencies in five specific areas. This instrument was only administered if the child scored more than 1 standard deviation below the mean on the McCarthy Scales' general cognitive index. Thus, this assessment device was only used with lower functioning children to identify their skills and competencies in the areas of communication, cognitive development (termed pre-academic), gross motor development, social competencies, and self-help skills.

These data are summarized for each of the four groups in Table 9 which presents the average sub-scale score for each group. This score was obtained by summing the students' scores for each item tested; thus, the students' scores (from 1 to 5) on each item administered were added together to obtain their total score. The average for the entire group was then computed using this measure. The second score in Table 9 is a ratio of the students' total score on that sub-test divided by the total possible score on that sub-test if the student had been given every item on the

TABLE 9

AVERAGE TOTAL SUB-SCALE SCORES AND RATIO OF TOTAL SCORE OBTAINED/TOTAL POSSIBLE SCORES FOR EACH GROUP ON THE CRITERION REFERENCED TEST

	E.C.S.		Day Care	
	Urban	Rural	Urban	Rural
Communication				
Receptive Skills	200.6* (.98)**	200.9 (.84)	185.8 (.77)	231.8 (.96)
Expressive Skills	171.6 (.82)	147.8 (.70)	123.8 (.59)	133.3 (.63)
Pre-Academic				
Primary Skills	191.4 (.75)	158.8 (.62)	156.0 (.61)	145.2 (.56)
Advanced Skills	258.8 (.79)	155.1 (.55)	162.4 (.58)	125.3 (.45)
Gross Motor				
Primary Skills	125.0 (.71)	124.4 (.71)	118.9 (.68)	122.2 (.70)
Advanced Skills	145.7 (.59)	155.4 (.63)	128.6 (.52)	123.8 (.51)
Social Competencies	167.4 (.90)	160.6 (.87)	154.7 (.84)	156.6 (.85)
Self-Help Skills	133.6 (.81)	118.8 (.72)	111.6 (.68)	106.8 (.75)

* Total average scores for each sub-scale

** Ratio of total obtained scores divided by the total possible for each subtest.

subscale. Thus this proportion represents a measure of students performance on that sub-scale relative to a maximum performance. These ratios were then averaged across all group members. The average is presented in Table 9 in parentheses.

One of the first trends emerging from the data presented in Table 9 concerns the performance of the urban ECS children who scored slightly higher in the expressive communication and cognitive areas (pre-academic). In the other areas there is a consistency across groups in terms of total performance. These differences in performance between urban ECS groups and the other three groups are also confirmed when one looks at the ratios of the obtained scores over the total possible score. In both communication and cognition, the urban ECS group did obtain higher ratios indicating a higher level of performance on the items within the sub-tests than was the case for the other three groups of children.

A second interesting finding from these data is the high level of development of social skills exhibited by all students. The ratios presented in Table 9 for social competencies suggest that the students were performing at or near the maximum level of functioning in social skills as assessed by this test. These data may support the increased level of social functioning children exhibit when integrated into day care and kindergarten programs.

Also worthy of mention is the higher level of functioning in the communication receptive sub-scale. As can be seen from the total scores as well as from the ratios, all children exhibited a high level of performance in receptive language skills including the rural day care group which was the youngest group in the study.

Two major deficiency areas emerged on this test: the pre-academic area, including primary and advanced skills, and the advanced motor skill area. Pre-academic competencies include such skills as perceptual motor coordination, sequencing, writing, pre-reading skills, shape and colour discrimination, and early arithmetic skills. It was anticipated from the children's general functioning (as exhibited on the McCarthy), and the fact that the children being integrated were identified as special needs children, that these areas of functioning would in fact require some remediation. This is particularly the case for the rural ECS and the two day care groups. Many of the skills and competencies measured by this sub-scale are related to early school functioning and it is apparent these children would require some remedial assistance in order to function more adequately in the regular school program.

The advanced motor skill area includes such competencies as walking, going up and down stairs, jumping, coordination, dynamic balance, and use of equipment. Again, having considered the motor delays exhibited by the children on the McCarthy Scales, it is no surprise that the children exhibited deficiencies in these areas. These areas would also provide several major objectives for remediation and teaching for children in integrated program settings.

Expressive language skills and self-help skills were two other areas that would be worthy of remedial attention.

In summary, the criterion-referenced assessment device provided a picture of the children as exhibiting strong receptive language competencies and a fairly high level of social skills. However, some assistance may be required with expressive language skills, pre-academic/cognitive development, motor skills, and self-help skills. The urban ECS group emerged as needing the least amount of assistance in all areas measured by this device.

In an effort to validate the criterion referenced assessment device, the ratio scores for each subscale shown in Table 9 were correlated with the age equivalent scores for the McCarthy GCI, motor and memory subscales. The Pearson product moment statistic was used to calculate these correlations, which are shown in Table 10. The more advanced sections of the criterion referenced device correlated significantly with the McCarthy scales, for example, the McCarthy Motor scale is significantly correlated with the Pre-academic advanced scale, and the Gross Motor advanced scale. This is not unexpected in view of the fact that both subtests share similar types of items with the McCarthy. Similarly, the Communication-expressive subscale is significantly correlated with both the McCarthy GCI and

TABLE 10

CORRELATIONS BETWEEN MCCARTHY AND CRITERION REFERENCED ASSESSMENT SUBSCALES

	GCI	MOTOR	MEMORY
Communication-receptive	0.1887 (n=34) P=0.143	-0.0441 (n=34) P=0.402	0.2600 (n=34) P=0.069
Communication-expressive	0.4435 (n=34) P=0.004	0.2057 (n=34) P=0.122	0.5718 (n=34) P=0.000
Pre-academic-primary	0.1280 (n=34) P=0.235	0.1423 (n=34) P=0.211	0.0321 (n=34) P=0.429
Pre-academic-advanced	0.1881 (n=34) P=0.143	0.5166 (n=34) P=0.001	0.2170 (n=34) P=0.109
Gross Motor-primary	-0.0246 (n=34) P=0.445	-0.1090 (n=34) P=0.270	-0.0721 (n=34) P=0.343
Gross Motor-advanced	0.0560 (n=34) P=0.377	0.3150 (n=34) P=0.035	-0.0310 (n=34) P=0.431
Self Help	0.1370 (n=34) P=0.220	0.3335 (n=34) P=0.027	-0.0174 (n=34) P=0.461
Social skills	0.2859 (n=34) P=0.051	0.5803 (n=34) P=0.000	0.4020 (n=34) P=0.009

subscales. Again this is not unexpected as the primary nature of these subtests responses is psycholinguistic. Conversely, of interest, is the fact that the criterion referenced primary (or lower level) sections of Communication receptive, Pre-academic primary, and Gross Motor primary did not correlate with the McCarthy GCI, Motor, and Memory Scores. It appears, therefore, that the Criterion Referenced device is useful in providing additional, more detailed information about the lower functioning children that is not available from the McCarthy. Certainly, a significant number (1/6) of the children were unable to perform enough of the McCarthy items to obtain a normative score.

G. Interaction Patterns: Handicapped Children, Peers, and Teachers

As previously described in the Methods section, the Preschool Observation System (P.O.S.) was designed to measure the social interaction of handicapped children within integrated preschool settings. The P.O.S. consisted of a total of 34 behavior codes and 8 activity categories. The data collected on the M.O.R.E. using the P.O.S. were analyzed in the following way. First, as 30 minutes of data were not obtained on all children, it was necessary to transform the data to make them comparable. Consequently the original frequencies and duration counts from the M.O.R.E. were transformed to frequency per minute per behavior, and proportion of total time per play activity respectively. The means for these two sets of data were then calculated over all children. The results from this procedure are displayed in Table 11.

As can be seen some of the behaviors were either not observed at all or observed very infrequently. These are indicated by an asterisk in Table 11. Because these 22 behaviors had such low frequencies of occurrence, they were omitted from further analysis. The remaining 12 behaviors (shown in order of mean frequency of occurrence in Table 12 and the original 8 activity categories (shown in order of mean proportion of time spent in Table 13) were then analyzed using the Pearson product moment correlation. The demographic variables of age, sex, location and type of program, number of handicapped children in the program, and functioning level of the children (as indicated by their McCarthy score) were included in this analysis as well.

By examining the activity categories, one can get some idea of the way handicapped children in integrated settings spend their time. Almost half of the children's time (44.3%) was spent in isolate (21.5%) and parallel (22.8%) play. Onlooker and cooperative play were exhibited only 12.5% of the time. Further, group instruction outnumbered individual instruction 2 to 1 (23.9 to 12.9%). The children rarely (less than 2%) demonstrated those behaviors designated as nonsocial.

TABLE 11

MEAN OCCURRENCE BEHAVIORS PER MINUTE

Behavior	Mean occurrence/minute
B1 (Initiate verbal interaction to peer)	= 1.124
B2 (Receive verbal interaction from peer)	= 0.900
*B3 (Imitates peer)	= 0.036
*B4 (Provides positive reinforcement to peer)	= 0.010
*B5 (Receives positive reinforcement from peer)	= 0.004
*B6 (Reprimanded by peer)	= 0.006
B7 (Initiates motor-gestural interaction to peer	= 0.323
B8 (Receives motor-gestural interaction from peer	= 0.330
*B9 (Initiates physical/verbal aggression to peer)	= 0.030
*B10 (Receives physical/verbal aggression from peer)	= 0.020
B11 (Initiate verbal interaction to tchr.)	= 1.152
B12 (Receives verbal interaction from tchr.)	= 2.306
*B13 (Imitates tchr.)	= 0.037
*B14 (Provides positive reinforcement to tchr.)	= 0.037
B15 (Receives positive reinforcement from tchr.)	= 0.110
*B16 (Reprimanded by tchr.)	= 0.009
B17 (Initiates motor-gestural interaction to tchr.)	= 0.168
B18 (Receives motor-gestural interaction from tchr.)	= 0.467
*B19 (Initiates physical/verbal aggression from tchr.)	= 0.003
*B20 (Receives physical/verbal aggression from tchr.)	= 0.002
B21 (Initiate verbal interaction to h.p.)	= 0.056
B22 (Receives verbal interaction from h.p.)	= 0.044
*B23 (Imitates h.p.)	= 0.001
*B24 (Provides positive reinforcement from h.p.)	= 0.000
*B25 (Receives positive reinforcement from h.p.)	= 0.000
*B26 (Reprimanded by h.p.)	= 0.000
*B27 (Initiates motor-gestural interaction to h.p.)	= 0.018
*B28 (Receives motor-gestural interaction from h.p.)	= 0.010
*B29 (Initiates p/v aggression to h.p.)	= 0.000
*B30 (Receives p/v aggression from h.p.)	= 0.000
*B31 (Models for peer)	= 0.000
*B32 (Models for tchr.)	= 0.000
*B33 (Models for handicapped peer)	= 0.001
*B34 (Compliance Behavior)	= 0.138

* behaviours either not observed orobserved infrequently; omitted from further analysis.

TABLE 12

MOST FREQUENT OCCURRING BEHAVIORS

Behavior	Mean occurrence/minute
B12 (Receives verbal interaction from teacher)	= 2.306
B11 (Initiate verbal interaction to teacher)	= 1.152
B1 (Initiate verbal interaction to peer)	= 1.124
B2 (Receive verbal interaction from peer)	= 0.900
B18 (Receives motor-gestural interaction from teacher)	= 0.467
B8 (Receives motor-gestural interaction from peer)	= 0.330
B7 (Initiates motor-gestural interaction to peer)	= 0.323
B17 (Initiates motor-gestural interaction to teacher)	= 0.168
B34 (Compliance behavior)	= 0.138
B15 (Receives positive reinforcement from teacher)	= 0.110
B21 (Initiate verbal interaction to handicapped peer)	= 0.056
B22 (Receives verbal interaction from handicapped peer)	= 0.044

TABLE 13

PLAY ACTIVITIES

Activity	Proportion of time spent	
	Mean	Variance
P6 (group instruction)	0.239	= 0.039
P4 (parallel)	0.228	= 0.045
P2 (isolate)	0.215	= 0.250
P7 (individual instruction)	0.129	= 0.016
P5 (cooperative)	0.080	= 0.021
P8 (unable to record)	0.060	= 0.008
P3 (onlooker)	0.045	= 0.005
P1 (nonsocial)	0.014	= 0.004

Turning to the specific behavioral patterns, the absence of any imitiating behaviors on the part of the handicapped children is of note. This finding is important since one of the major reasons for including handicapped children within regular programs is to provide the opportunity to learn by imitating more advanced peers. The absence of negative interaction between the handicapped children and other children, as well as between the handicapped children and their teachers is also of interest. It appears, therefore, that at worst, the general tone of the environment can be described as neutral, and in view of the reasonably high occurrence of positive reinforcement from the teachers, could probably be described as positive. Interaction among handicapped children is also notably absent. However, it is important to point out that one third of the programs had only one handicapped child enrolled thus precluding interaction among handicapped children. The most frequent behavior dyad is verbal interaction between the handicapped child and their teacher. The teacher initiates verbal interaction however, twice as often (2.306/minute) as does the handicapped child (1.152/minute). The much higher amount of interaction between the handicapped children and their teachers, than between the two groups of children is in keeping with the findings of previous researchers (Guralnick, 1981; Kennedy et al, 1976; Sinson & Wetherick, 1981). Conversely, the handicapped child is more likely to initiate verbal interaction to their peers (1.124 compared with .900/minute) than to receive verbal interactions from their peers. Regardless of direction, the four most frequent behaviors were verbal in nature, indicating the most frequent mode of interaction for this group of children was linguistic. Nonspeech (motor-gestural) interaction characterized the next four most frequent behaviors, however, their frequency was much lower ranging from .467/minute to .168/minute.

The most salient demographic variables for comparison with the behavior patterns appeared to be age, type of program, and functioning on the McCarthy. For example, age was highly correlated with compliance behavior, that is, older children were more compliant. Group instruction correlated highly with type of program, that is, children in ECS programs spent significantly more of their time in group instruction than did children in day care. Individual instruction correlated neither with functioning level or type of program. Functioning level as indicated by the McCarthy correlated positively with co-operative play and negatively with isolate play; that is, higher functioning children displayed more co-operative play, and less isolate play.

Correlations between individual behaviors which are shown in Tables 14a,b & c revealed some interesting patterns. (All correlations are displayed together in Appendix C). Initiating verbal interaction with a peer, for example, correlated highly with receiving verbal interaction

Table 14(a)

Correlation Matrix, Demographic Variables, Behavior and Play Activities

Correlations

Variables	Age	Program	McCarthy	B_{11}	B_{12}	B_{15}	B_{17}	B_{18}
+.7					P_7			
+.6				B_{12}				
+.5	B_{34}			P_7	B_{34} B_{18}			
+.4		P_6						P_7
+.3			P_5			B_{17}		
+.2	B_{12} P_6 B_{15} P_7	B_{21}	B_1 B_2	B_{17} B_{34}	B_{15} B_{17}	B_{18} P_7 P_3	B_{18} P_7	
0								
-.2	McC	B_2	B_{12} B_{18} B_{15} P_2	P_3 P_4	McC P_4	McC		McC
-.3		P_4			P_5			
-.4								
-.5								
-.6								
-.7								

B_{11} initiates verbal interaction to teacher

B_{12} receive verbal interaction from teacher

B_{15} receiver positive reinforcement from teacher

B_{17} initiates motor/gestural interaction to teacher

B_{18} receives motor/gestural interaction from teacher

Table 14(b)

Correlation Matrix,

Demographic Variables,

Behavior and Play Activities

Correlations

Variables	B_1	B_2	B_7	B_8	B_{21}	B_{22}	B_{34}
+.7	B_2						
+.6							
+.5	P_4	B_8			B_{22}	B_{21}	Age, B_{12}
+.4	B_7	P_4	P_4				
+.3							P_7
+.2	B_8 P_5	B_7 P_5	B_8	P_4	B_5 B_6	P_5	B_{11}
0							
-.2	B_{12} P_3 P_7	B_{12} P_6	P_2 P_3	P_2			
-.3	B_{18} P_2	B_{18} P_2 P_3					
-.4							
-.5							
-.6							
-.7							

B_1	initiates verbal interaction to peer
B_2	receives verbal interaction from peer
B_7	initiates motor/gestural interaction to peer
B_8	receives motor/gestural interation from peer
B_{21}	initiates verbal interaction to h.p.
B_{22}	receives verbal interaction from h.p.
B_{34}	compliance behavior

Table 14(c)

Correlation Matrix

Demographic Variables,

Behaviors and Play Activities

Correlations

Variables	P_1	P_2	P_3	P_4	P_5	P_6	P_7
+.7							B_{12}
+.6							
+.5				B_1 B_2			B_{11}
+.4						Prog.	B_{18}
+.3				B_7	Mc		B_{34}
+.2			B_{15}	B_8	B_1 B_2 B_7 B_{22}	Age B_{21}	Age B_{15} B_{17}
0							
-.2		Mc B_7 B_8	B1 B_2 B7 B_{11}	B_{11} B_{12}	P_2	B_2 P_2	B_1 P_4 P_5
-.3		B_1 B_2		Prog	B_{12}		
-.4						P_4	
-.5							
-.6							
-.7							

P_1	Nonsocial
P_2	Isolate
P_3	On-looker
P_4	Parallel
P_5	Cooperative
P_6	Group
P_7	Individual

from a peer. Similarly initiating verbal interaction to a peer correlated highly with initiating a motor/gestural action to a peer. That is, children who made verbal initiations were more likely to make motor/gestural initiations to peers as well as receive verbal interactions from peers. This suggests that those handicapped children who did initiate behaviors were more likely to receive behaviors, both verbal and motor-gestural from their nonhandicapped peers. Also those children who made verbal initiations were more likely to make motor-gestural initiations.

Initiating and receiving verbal interaction from peers both correlated with parallel play; as parallel play increased so did verbal interaction on the part of the handicapped child. Also, receiving verbal interaction from peers correlated with receiving motor/gestural interaction from peers. Again children selected by the nonhandicapped peers as targets of their verbal interactions were more likely to be the recipients of motor/gestural interaction.

Verbal and motor/gestural interactions with teachers on the other hand, correlated with individual instruction. The receiving of verbal interaction from the teacher correlated highly with the giving of verbal interaction to the teacher and also with receiving motor/gestural interaction from the teacher. Therefore, the more often the child initiated verbal interchanges to the teacher, the more often they received verbal interaction, and similarly, children who received verbal interactions from the teacher were more likely to receive motor/gestural interaction from the teacher.

Some of the more interesting relationships were analyzed further using correlated and uncorrelated T-tests. Three groups of handicapped children were created by assigning them to the top, middle, and bottom thirds of the sample on the basis of the ratio of their McCarthy GCI age equivalent/chronological age. The higher functioning children (mean ratio of age equivalent on McCarthy GCI/chronological age = .973) displayed significantly more co-operative play ($p<.01$) while the lower functioning group (mean ratio of age equivalent on McCarthy GCI/chronological age = .550) displayed significantly more isolate play ($p<.05$). Children in the higher functioning group interacted significantly more with their peers ($p<.05$) initiating more ($p<.05$) and receiving more ($p<.05$), (verbally and motor/gesturally). Whereas the children in the lower functioning group interacted more frequently with their teachers although this difference did not reach statistical significance. They did receive significantly more interactions from teachers than their higher functioning peers, although there was no differences in initiating interactions with teachers between the two groups.

Further, although there was no difference in the average number of initiations with peers compared with teachers, the handicapped children initiated significantly more interactions (verbal and motor/gestural) than they received from their nonhandicapped peer group ($p<.001$). Conversely, although there was no difference in the average number of receiving behaviors from peers compared with teachers, the handicapped children received significantly more interaction from teachers than they initiated ($p<.001$). Further, the average amount of teacher interaction (all teacher behaviors) is higher than the average amount of peer interaction (all peer behaviors), although this difference did not reach significance at the .05 level ($p<.10$).

In summary, the major findings of the observational data appear to be the following. The predominant mode of interaction for this total group of handicapped children is verbal. There was no difference in the level of verbal interaction between the higher and lower functioning groups. The higher functioning children, however, displayed significantly more co-operative play and interactive behaviors with peers, whereas the lower functioning children displayed significantly more isolate play and more interactive behaviors with teachers, although only the receiving behaviors were significantly greater. Interestingly, the handicapped children were more likely to initiate interaction with their non handicapped peers than the reverse. These findings are consistent with studies such as Guralnick's (1981) which have found that the more severe the nature of the handicapping condition, the lower the amount of interaction with nonhandicapped peers.

H. Non-handicapped Peers: Attitudes

The Social Acceptability Apperception Test (S.A.A.T.) was utilized to obtain information regarding attitudes of the nonhandicapped children towards their handicapped peers.

The S.A.A.T. was administered to children in both urban and rural ECS programs and within five of nine urban day care centres. The S.A.A.T. was not given at the remaining 4 urban and 4 rural day care centres as it was felt the children were too young to be able to complete the drawings. Thus, from 18 ECS programs and 5 day care programs, 465 drawings were obtained. A considerable number (one/quarter) of drawings contained figures that were unrecognizeable, and thus unscoreable. The results discussed below, therefore, represent 75% of the total drawings collected.

The drawings were scored according to six categories previously described in the Methods section. In addition these findings were compared to data obtained from kindergarten children in a previous investigation (Berger, 1980); the children in the earlier study were predominantly urban, and the school they attended housed a program for dependent handicapped children from 5 to 18 years of age.

Table 15 presents the data for the above categories. This data includes both groups in this study and kindergarten children from two Edmonton schools in which programs were initiated for the multiple dependent handicapped (termed the RDH sample).

TABLE 15

PERCENTAGE OF SAAT DRAWINGS EXHIBITING SPECIFIC CHARACTERISTICS FOR DAY CARE (n=41) and E.C.S. (n=304) CHILDREN AND FOR THE RDH STUDY KINDERGARTEN CHILDREN

	Day Care	Early Childhood Services	R.D.H. (ECS)
Proximity:			
Touching	2%	7%	10%
Close	37%	28%	54%
Distant	41%	52%	20%
Clusters:			
Friend Closer Handicapped	37%	50%	15%
Me Closer handicapped	38%	22%	20%
Cluster	0%	8%	15%
Couples	2%	1%	0%
Other	20%	14%	40%
Helping Relationship	7%	2%	0%
Physical Sign of Handicaps	24%	28%	50%
Size:			
Me Larger others	15%	18%	20%
Me and Friend larger	17%	22%	12%
Handicapped large	5%	13%	12%
Equal Size	54%	45%	37%
Detail:			
Greater for Me	34%	1[illegible]	14%
Me and Friend Greater	12%	18%	36%
Greater for Handicapped	2%	7%	0%
Equal Detail	34%	57%	35%
Expression:			
Me Smiling	7%	3%	1%
Me and Friend Smiling	7%	11%	12%
Handicapped Smiling	2%	2%	0%
Everyone Smiling	63%	78%	70%

Generally, there is some consistency across the three samples and some noteworthy findings and differences were noted in the following areas:

Physical signs - About 1/4 of the day care and ECS sample drew physical signs of handicap whereas the RHD sample had physical signs in 50% of the drawing; this phenomenon may be due to the more severely physically handicapped children in those schools;

Detail - The day care sample had a greater detail for themselves than for the others; perhaps a reflection of their younger age and more "egocentric" perception;

Clusters - The day care sample had a greater percentage of drawings with themselves and their friends close to the handicapped than the other groups;

Proximity - The day care and ECS samples portrayed themselves close to the handicapped child less frequently than was the case with the RDH sample.

The consistency of the three groups in portraying the children in clusters, with few stigmata, equal size and detail of the figures and generally all figures smiling, suggests an overall positive accepting attitude on the part of the nonhandicapped peers towards the handicapped children in the programs. These findings bode well for the general acceptability and positive perceptions by the children of their peers with special needs.

I. Program Characteristics: General Program Information; Staff and Programming Characteristics; and Parental Involvement

General Program Information

Specific information about each of the four program types is provided in Table 16; these data provide a perspective on the type of programs in which the children were enrolled. This information was obtained from the parental interviews previously described. As can be seen in the table, the children were generally in the program for 13 months or longer except for urban ECS programs where children had an average stay of 8 months. Thus it appears that children with special needs are spending at least two academic years in the preschool programs in which they are integrated.

In the rural programs, this was generally the first group experience for the children whether it was day care or Early Childhood Services. In the urban programs, however, it was notable that the current program was not the first group experience for the majority of the children. In the day cares about 60% of the children attended full-time and 40% part-time in both urban and rural setting.

Group size in the programs was generally consistent except for rural day care which seemed to be slightly higher with an average of 21.5 children per group. As well the average number of handicapped children in the group was generally around 1.5 again except for rural day care which seemed to have an average of three children with special

TABLE 16

PROGRAM INFORMATION

	E.C.S.		Day Care	
	Rural	Urban	Rural	Urban
Length of time in program (in months)	$\bar{x} = 14.08$	$\bar{x} = 8.00$	$\bar{x} = 13.36$	$\bar{x} = 20.0$
First group experience	yes 83% no 17%	yes 13% no 87%	yes 73% no 27%	yes 19% no 81%
Attendance: Part-time	n/a	n/a	44%	36%
Attendance: Full-time	n/a	n/a	56%	64%
Group size	$\bar{x} = 18.75$	$\bar{x} = 16.19$	$\bar{x} = 21.5$	$\bar{x} = 15.3$
Number of handicapped children per group	$\bar{x} = 1.70$	$\bar{x} = 1.64$	$\bar{x} = 3.00$	$\bar{x} = 1.47$
Ratio (handicapped/ non-handicapped) per group				
< 1:5	0	6	3	2
< 1:10	8	4	7	11
< 1:15	6	0	2	4
< 1:20	1	2	0	4
> 1:20	1	4	0	0

needs per group. The ratio of handicapped to nonhandicapped children was generally 1 to 10 or 1 to 15. This ratio seemed to be the optimal range chosen by programs for integrative experiences. Thus, there typically were a greater number of nonhandicapped children with anywhere from one to four handicapped children integrated into the program.

Staff and Programming Characteristics

In order to examine the staff's view and attitudes toward integration, personnel preparation, actual programming activities,and parental involvement the questionnaires described in the Methods section was employed with the teachers and aides in each program. Responses will be presented in the following sequence: ECS teachers, ECS aides, day care teachers, and day care aides.

ECS Teachers

Twenty one ECS teachers responded in all, eleven from urban and ten from rural programs. Table 17 provides a summary of the ECS teachers' responses to each of the questionnaire items. This table will be referred to when reviewing responses of the teachers to each item.

1. Reasons for Integration.

A number of reasons were cited by teachers supporting the integration of special needs children into ECS programs. Three major areas seemed to encompass the reasons provided.

TABLE 17

ECS TEACHER QUESTIONNAIRE RESULTS

	Urban		Rural	
	Yes	No/NoR*	Yes	No/NoR*
Consultation Prior to Enrolment	27%	73%	70%	30%
Positive Teacher Attitude towards Handicapped Child	81%	19%	90%	10%
Use of aides in classrooms for 1 - 1 instruction	45%	55%	80%	20%
Teacher Training for Integration Was Adequate	27%	73%	30%	70%
Individualized Programs Prepared for Handicapped Child	50%	50%	100%	0%
Restrictions for Handicapped Child from Total Program Involvement	27%	73%	40%	60%
Planning for Student Generalization	81%	19%	90%	10%
Teaching the Handicapped Child Socialization Skills	54%	46%	70%	30%
Handicapped Child Exhibited Behaviour Problems	64%	36%	40%	60%
Use of Student Observations and Assessment	64%	36%	90%	10%

* no/no response

First, it was felt that benefits to the handicapped child were important. These included: remaining at home, not travelling long distances, being able to learn from peers, and learning within normal settings.

Second, integration benefited nonhandicapped children by developing tolerance, helping them learn about individual differences, and helping them learn to care for someone with special needs.

Third, parents of children in integrated programs benefited. It was felt that the parents of nonhandicapped children learned how to deal more effectively with their children's view of handicapped individuals, whereas the parents of the handicapped child developed an increased and enhanced view of their child's potential.

Disadvantages mentioned by both groups included an absence of trained personnel, reluctance on the part of teachers to integrate handicapped children, poorly trained aides, and the lack of workshops to prepare persons for this type of work.

2. Criterion of Successful Integration.

A number of alternative strategies were used to judge successful integration. The development of successful social skills such as playing with other children was one key criterion used in rural programs to judge the success of integration. Several urban programs mentioned the attitude of handicapped children as an important measure of success for integration. Other indices of success included academic success, social and emotional development, task completion, program operation, and adequacy of the program for nonhandicapped children.

3. Consultation Prior to Enrolment.

Most rural teachers (75%) but fewer urban ECS teachers (27%) were consulted prior to the enrolment of the handicapped child in their program. The range of prior notice in rural programs varied from a minimum of one month to an unspecified longer period; prior notice in the urban settings extended from one week up to three months.

4. Teacher Attitudes.

In both rural and urban programs positive teacher attitudes were found towards handicapped children in their programs (82% in urban programs, 90% in rural programs). Most commonly, personal benefit to the teacher was cited as a reason for positive attitudes.

5. The Use of Aides.

The presence of aides in the classroom varied considerably between urban and rural settings. In urban settings, only two of eleven teachers had special needs aides, whereas for rural programs all teachers had a special need aide. In the rural group, 80% provided one to one instruction with the handicapped student. Other additional aide activities included teaching such self-help skills as toilet training and eating.

Different administrative organization between urban and rural programs seemed to be part of the reason for the difference in the presence and use of aides. For example, although most urban teachers did not have "special needs aides" they had kindergarten aides even in programs where the class enrolment was very low. The role of the kindergarten aide, however, was different than the special needs aides' role.

6. Teacher Preparation for Integration.

Two questions at this point in the interview focused upon the amount and adequacy of teacher preparation. It should be pointed out that these questions failed to differentiate between preservice teacher preparation and inservice teacher preparation. Thus no distinction can be drawn between these two types of teacher training.

Teacher preparation in both urban and rural areas varied quite substantially from a few inservice courses through correspondence courses, workshops, to actual university preparation. However, teacher preparation seemed minimal in both groups. In the urban sample, for example, one teacher mentioned having an ECS workshop as a source of training, 2 teachers mentioned that they had university courses as a source of on-thejob training and 9 teachers mentioned that they had no pre-training related to special needs children whatsoever.

As can be seen in Table 17, teachers felt generally that their preparation was inadequate for working with children with special needs. In the urban sample 73% of the teachers felt their training was inadequate while 70% of the rural teachers felt their training was inadequate. Generally speaking the teachers felt that more preparation was necessary. Specific content areas mentioned for inclusion in training programs included problems of handicapped children, discipline and behaviour modification, testing for prescriptive program development, observation, teaching strategies with children, and goal setting.

7. Individualized program preparation

Individualized program planning constituted a crucial dimension of integration for children with special needs. The development of an individual program for the child insures the differentiation of instructional needs and objectives for the special needs child. As well, on-going review of individual programs provides a means of accountability in evaluating the type and quality of service being provided to the child with special needs within integrated settings.

Individualized programs were prepared for special needs children in 50% of the urban programs and 100% of the rural programs. Both special needs aides as well as teams including the teacher, an aide, and other professionals were involved in the program preparation.

Interestingly, 60% of the rural program staff indicated that the special needs aide planned and implemented the individual programs goals for students, whereas in the urban sample 80% of the teachers responded that they both planned and implemented program goals and activities.

It was also found that a more diverse group of personnel was involved in planning programs in the rural sample than in the urban area. Rural program operators indicated that many sources assisted them in developing programs for their children including: private consultants, speech therapists, hospitals and the university.

8. Goals.

We attempted to determine if goals were established for the handicapped children. However, this question was worded in such a way that it was impossible to differentiate between goals, materials, and specific programs used to obtain these goals. Each of these elements was not examined individually, therefore the results are presented in terms of the general components mentioned by program personnel. With respect to goals, several developmental areas were mentioned as targets of programming including: motor(fine and gross motor),language, cognition, self help, socialization and kindergarten skills.

With respect to materials and programs, various programs were mentioned: the Portage Guide, Peabody Language Kit, the Meachem Series, DISTAR, WISP and POTOMAC,

As well, a toy lending library service was employed in one program and the "Vision up" Series was employed in a program with a visually handicapped child.

9. Program Restrictions.

Several teachers felt that the handicapped children were restricted from full participation in their programs. It was found that 40% of the rural teachers and 27% of the urban teachers (See Table 17) felt that their handicapped child was restricted from total program involvement.

10. Specific Teaching Strategies.

Several questions dealt with the location and manner in which teaching was carried out. In the rural sample, strategies included teaching at the child's level, assess-teach-review, modelling, incidental teaching, work-sheets, drill, and practicing within the group, skills that had been taught in one-to-one situation. Locations for instruction included the regular classroom, learning centres, practical situations, and one to one teaching areas.

The urban sample exhibited much fewer diversity of teaching strategies. The strategies mentioned by urban teachers included extra assistance with regular lessons, the use of special examples, teaching through regular program with special oral and visual presentation and demonstrations. Thus, it appears that the urban program personnel employed the large group instructional format more frequently than the rural programs.

11. Planning for Generalization.

It was interesting and indeed reassuring to note that many programs planned specifically for generalization of the child's skills and competencies to natural environments. Urban teachers (81%) and rural teachers (90%) both planned for student generalization. This planning involved assisting the child to use in the home and in the community the skills being learned in school. Methods of accomplishing these objectives included sending materials home to parents, practice in larger groups, and practice during field trips. The use of a communication book or notes to parents were most often mentioned as a vehicle of communication between home and school.

12. Teaching Socialization.

The development of social skills also seemed to be a priority in many school programs. At least half of the urban teachers (54%) and most rural teachers (70%) actively planned instruction of socialization skills. Strategies for teaching skills in this area included putting the child into a larger group, remediating child-specific, deficient skills, and having discussions with nonhandicapped children about assisting the handicapped child interacting with the group; the use of partner days and cooperative games were other, often used strategies. Reinforcing nonhandicapped children for cooperative activities with the handicapped child was also mentioned frequently.

However, several teachers from both samples felt that the handicapped child did experience some difficulty in interacting with their peers. These problems stemmed from the child being primarily engaged in parallel play, having slow speech interfering with their social interaction, and not initiating social interchange. Generally speaking, less than 37% of the teachers in both samples felt that their handicapped students interacted well with the nonhandicapped children. This finding is consistent with the literature in the field regarding the interaction patterns of nonhandicapped and handicapped children within integrated settings.

13. Frequency of Behaviour Problems.

The handicapped children in both urban and rural ECS programs seemed to exhibit behaviour problems fairly frequently. In urban programs, many teachers (64%) felt the handicapped students exhibited behaviour problems while 40% of the rural teachers felt the same. Typical problems included passivity, aggression, withdrawal, attention seeking, temper tantrums, inattentiveness, uncooperative behaviour, and frequent mood changes.

14. Program Assessment.

A wide variety of methods and procedures were described as being used for assessment of the special needs child's program within integrated ECS programs. In urban programs, 64% of the teachers mentioned using specific observation and assessment procedures whereas 90% of the rural program teachers mentioned using specific procedures. The types of measures included, anecdotal records, picture files, discussions, recording daily lessons, and progress noted on a card file. Frequency of assessment varied substantially across programs from daily observation through weekly observations, monthly assessments and semi-annual assessments. Some urban programs mentioned the use of outside specialists to assess the children.

15. Parent Involvement

Approximately half the teachers in ECS programs (urban 54%; rural 58%) met with parents of special needs children once a month or less. No clear pattern of the frequency of parent contact emerged.

Only one rural program held meetings for the parents of their special needs children. Several programs commented that a meeting for parents of special needs children was inappropriate as the children's handicapping conditions were quite different.

Most rural teachers (80%) and 67% of urban teachers felt parents were involved in their programs. The three most frequent types of parental involvement were volunteering in the classroom, working on home program, and observing in the classroom. Other types of involvement included program administration, providing materials, and goal planning.

ECS teachers in both urban and rural areas felt parents needed help in three areas: behaviour management, reassurance and support, and ideas for home programming. Other specific areas parents needed help with included arranging funding, specific ideas for speech and language, small muscle coordination, and self initiation.

E.C.S. Aides

The total number of respondents was nine; however, seven of these were from rural programs and two from urban programs. All rural programs (7/7) had special needs aides, whereas only 18% (2/11) of urban programs had special needs aides. It is impossible, therefore, to draw any meaningful comparisons between rural and urban ECS aides (special needs), or to make any statements about the functioning of urban ECS aides in general.

1. Reasons for integration.

Advantages of integration given by ECS aides focused on the potential benefits for the handicapped learner. ECS aides felt the handicapped child learns he can play with peers, learns more easily from peers, and is treated like a normal child rather than a handicapped child.

2. Criteria for successful integration.

Informal observation of the handicapped child's daily accomplishments, ability to play with other children, and the other children's reaction to the handicapped child were all given as ways of measuring a successful integration experience.

3. Aide Preparation for Integration.

In the rural sample pretraining for aides basically consisted of related work experience. Inservice opportunities included the correspondence course at the University of Lethbridge, various workshops, visits with consultants, and post secondary courses. In the urban sample, one aide had no training relating to special needs children, and the other was a trained teacher with related work experience.

Half of the aides (rural and urban - 56%) felt their training was inadequate. They felt more workshops and seminars should be available as well as increased contact with support personnel.

4. Individualized program preparation.

Individual programs were prepared for the handicapped child in 78% of the instances. These were planned by the aide alone or some combination of the aide and another professional (teacher or consultant).

Generally speaking, the same person who planned the program also implemented it. Occasionally the program was planned by a consultant and implemented by the aide. Resources for program planning and development included special education consultants, specialized professionals (speech, occupational and physiotherapists), teachers, hospitals and health units, and parents.

5. Goals.

Programs goals included language, cognitive, motor and social functioning, as well as behaviour and emotional development and self help skills.

Materials used included the following: Specific tumbling equipment, PORTAGE PROGRAM, POTOMAC, TRECK, WISP, DISTAR, MEACHEM series and VISION-UP KIT.

6. Program Restrictions.

Only two (22%) respondents felt the handicapped child in their program was restricted from regular program activities. Restricted activities included story telling, show and tell, formal arithmetic, reading, and some winter activities.

7. Specific Teaching Strategies.

Most rural ECS aides reported that the handicapped child spent 20% or less of their time in one to one instruction. The rest of their time was spent in the regular program. Specific strategies for teaching skills included using a scrap book, playing games, involving peers, using reinforcement, practise, practical situations, modelling and concrete play.

8. Planning for generalization.

Most rural aides (71%) planned for generalization. The same general strategy was mentioned by all aides: having the parents use the same techniques as were employed in the classroom.

9. Teaching socialization.

Over half of the ECS aides (57%) included specific strategies for enhancing socialization. These strategies included: encouraging participation in the group, having a discussion with peers regarding the handicapped child, peer modelling, reinforcing appropriate skills, time out, physical guidance, use of teachable moments, having adults model appropriate behaviour.

The comments on the handicapped child's interactions fell into two widely diverse groups: those aides who felt the handicapped child interacted well (37%), and those (63%) who described interactional difficulties such as no spontaneous interaction, prefers to play alone, and oral language very slow.

10. Frequency of behaviour problems

ECS aides (29%) reported that the handicapped child in their program displayed behaviour problems including withdrawn behaviour, passivity, despondence, short attention span and aggression.

11. Program Assessment

Methods used to measure child progress included charts, teacher assessments, the Portage, and formal assessments. Frequency of assessment varied widely from daily to yearly depending on the nature of tool and purpose of assessment.

12. Parental Involvement

Most of ECS aides (71%) met with parents of special needs children once a month or more frequently. Only one rural program had meetings for parents of special needs children (on a once a year basis). Half the aides felt parents were involved in the program. Types of involvement included: visiting, volunteering, and carrying out a home program. Aides felt parents needed most help with home programming and ideas for language activities.

Summary - ECS Staff

In summary, the responses of ECS teachers to many of the areas sampled relating to the integration process were varied and idiosyncratic. Some important patterns did emerge, however, and will be highlighted here.

Most teachers in both urban and rural groups felt positively about the integration process because of benefits that accrued to the handicapped child, the nonhandicapped children, and the adults (teachers and parents) involved in the integrated program.

Similarly teachers in both urban and rural groups agreed on the inadequacy of their training for this type of experience. Less than one third(6/18) of the teachers in both groups felt their training had prepared them adequately for integration.

A third important trend was that although no clear pattern of materials, programs or teaching strategies emerged for either group, both groups included specific strategies for enhancing generalization and socialization skills.

A major difference between the 2 groups existed in the presence and use of special needs aides. Only 18% urban ECS programs had special needs aides, whereas 100% of the rural ECS programs had special needs aides.

All rural programs planned individualized programs for their handicapped students and in 80% of them one to one instruction was provided by the aide. Only half of urban programs planned individualized programs for their special needs students and urban programs employed the large group instructional format more frequently than rural programs.

The responses of the ECS aides were consistent with the responses of the ECS teachers. Two differences emerged which are worthy of note: aides tended to see the handicapped children as exhibiting behaviour problems less often than the teachers (29% compared with 52%) and aides had more frequent parent contact (half of the teachers met with parents once a month or less whereas 72% of aides met with parents more frequently than once a month.)

Day Care Teachers

Eighteen day\care teachers responded in all, thirteen from urban programs and five from rural programs. As in the previous section Table 18 provides a summary of the day care teachers responses to each questionnaire item.

Two problems arose with the day care teachers' responses that were not present in the ECS sample. The first was the apparent differences in role responsibilities and staff organization in the different centres. Unlike the ECS programs where the teacher had the primary responsibility for program planning and implementation, in day care the responsibility is shared between different individuals such as the director, supervisor and day care assistant. These administrative differences contributed to a much less consistent picture for the day care responses compared with the ECS responses. The second problem was the small number of rural day care programs in our sample. Five respondents is too small to make any statements which could be considered representative of rural day care teachers in general.

TABLE 18

DAY CARE TEACHER QUESTIONNAIRE RESULTS

	Urban		Rural	
	Yes	No/NoR*	Yes	No/NoR*
Consultation Prior to Enrolment	85%	15%	20%	80%
Positive Teacher Attitude Towards Handicapped Child	92%	8%	80%	20%
Use of Aides in Classrooms for 1 - 1 Instruction	77%	33%	--	--
Teacher Training for Integration was Adequate	69%	31%	60%	40%
Individualized Programs Prepared for Handicapped Child	69%	31%	80%	20%
Restrictions for Handicapped Child from Total Program Involvement	8%	92%	20%	80%
Planning for Student Generalization	--	--	--	--
Teaching the Handicapped Child Socialization Skills	--	--	--	--
Handicapped Child Exhibited Behaviour Problems	46%	54%	0%	100%
Use of Student Observations and Assessments	--	--	--	--

* no/no response

1. Reasons for Integration.

The urban teachers gave numerous reasons for including handicapped children within their programs. These included enhanced social skills for both handicapped and nonhandicapped children, giving the handicapped child the chance to be with, gain acceptance from, and observe normal peers, giving the normal children a greater understanding of similarities and differences, and allowing the handicapped child to more realistically and clearly define his self image.

The rural teachers' responses were similar to those described by their urban counterparts. Teachers also pointed out problem areas with integration such as unprepared staff, a need for increased patience and understanding, not enough programs willing to accept children with handicaps, and the possibility that the other children may be envious of the attention given to the handicapped child.

2. Criteria for successful integration.

Criteria used by day care staff to measure successful integration included improved social skills, whether the handicapped child seemed happy, and the reaction of the other children, that is, if it appeared to be a positive experience for all concerned.

3. Consultation prior to enrolment.

In the rural sample, only 20% of the teachers were consulted prior to placement, however, 3 children preceeded teachers into the program. In the urban sample, 85% of teachers were consulted with the range of prior notice varying from a matter of days to two months.

4. Teacher attitudes.

Most rural day care teachers (80%) found having a handicapped child in their room enjoyable because they found it interesting and challenging, and they enjoyed watching the handicapped child's progress. Almost all urban teachers (92%) enjoyed having the handicapped child in their room. A more diverse number of responses were given by this group including they felt it helped them understand the handicapped better and that they had changed their attitudes towards handicapped people, the nonhandicapped children learned acceptance of handicapped individuals early in their lives, the handicapped child progressed through exposure to peer models, and having a handicapped child in the program added a new dimension to play.

5. The use of aides.

Aides in rural programs were used primarily to set up and carry out specialized programming for the handicapped child. They were also used to fill in when the regular teacher was away, and to assist with difficult behaviour. In the urban sample, 77% of aides were involved in meeting the needs of the handicapped child through one to one instruction. Other uses of aides' time included attending meetings, informing other staff of the handicapped child's needs, behaviour modification, integration into regular classroom activities, particularly at busy times such as meals and craft activities.

6. Teacher preparation for integration.

In the rural sample, the level of teacher training varied widely. One respondent had no training with regard to handicapped children, while another teacher had a special education degree. Many urban teachers (62%) had early childhood diplomas (these were usually from 2 year community college programs). The primary sources of continuing education for day care teachers included university and college courses and general (unspecified) inservices.

Some rural teachers (40%) and urban teachers (31%) were dissatisfied with their training. They felt they needed more input in terms of the types of handicaps, program methods and parent involvement.

7. Individualized Program Preparation

Most rural teachers (80%) indicated that individualized programs were provided for the special needs child. These programs were planned and implemented by the special needs aide in 100% of cases. Similarly

69% of urban teachers stated that individualized programs were provided for the special needs child. However in the urban sample, only 23% of the teachers indicated the program was planned and implemented by the same person. For example, 31% of the teachers stated that program planning was done by a specialized outside agency (for example, the Children's Hospital), while program implementation was carried out by the aide.

Support services for program development in the rural areas included speech therapists, parents, and the daycare director. In the urban sample, support services included the Children's Hospital mobile team, child care staff, parents, special needs aides, day care directors, and various allied professionals such as occupational therapists and speech therapists.

8. Goals.

Goals, materials and activities were described in the following ways. In the rural sample, goals included better use of hands and increased social interaction. Materials included flash cards, shapes, tape recorder, large crayons, and bliss symbols. Special activities included speech 'therapy', cutting and eye pointing.

In the rural sample, goals included better social interaction, intellectual development, increased confidence, speech, concept development, preparation for kindergarten, and fine and gross motor skills. Special materials mentioned were puzzles, balance board, and bean bags. Special activities included tracing, cutting, dot to dot, copying block designs, sequencing, stencil drawing, bead stringing, catching a ball and spending time with peers.

9. Program Restrictions.

Only one teacher in each group felt the handicapped child was restricted from regular program activities. In both instances, the child was physically handicapped and unable to participate in vigorous physical activity.

10. Specific Teaching Strategies.

Rural day care teachers indicated that the handicapped child spent 50% of their time in one to one instruction and 50% of their time in the regular classroom. In contrast, the urban teachers reported that the handicapped child spent anywhere between 0-10% of their in individualized instruction and 90%-100% of their time in the regular program. In three urban programs the children received individual therapy from professionals outside the day care on a part-time basis.

No specific teaching strategies were described by rural teachers. Urban teachers used techniques such as the presentation of stories, pictures, crafts, play and music all relating to the same theme, circle time, peer modelling and physical guidance. Adapting regular classroom activities to meet the needs of the handicapped child was also mentioned.

11. Planning for generalization.

In the rural sample, no specific techniques were identified, although the general approach described was to have the parents work with the children at home. In the urban sample, strategies mentioned included practising in classroom activities what the children were learning during one to one instruction (for example, during play or circle time). As well, by maintaining close communication, parents and teachers attempted to develop the same skills and concepts by teaching in the same way.

12. Teaching Socialization.

No specific strategies for enhancing socialization were given by rural teachers. In the urban sample, strategies included having peers work with the handicapped child in the one to one situation, reinforcing appropriate socialization, and placing the handicapped child with a nonhandicapped partner for games and at snack time.

Several teachers in the rural sample alluded to socialization as a problem for the handicapped child. One teacher mentioned that the handicapped child related better to one or two children than to the entire group, while another teacher mentioned the handicapped child related better to older children because they treated them as a younger playmate rather than as a peer.

13. Frequency of behaviour problems.

No behavioural problems were mentioned by rural teachers, while aggressiveness, withdrawn behaviour, and temper tantrums were mentioned by urban teachers (46%).

14. Program Assessment.

In the rural programs, measuring progress was typically done by an outside agency. Similarly, some urban programs also used outside agency assessments, while others mentioned specific tools such as the Portage Guide, and Services for the Handicapped forms as ways of measuring progress. The frequency with which progress measures were taken varied widely from daily (on-going in the classroom) to every six months (in the rural sample).

15. Parental Involvement

There was no consistent pattern of contact between day care teachers and parents among either rural or urban staff. Contact varied from daily to rarely (met once). Manner of contact also varied from face to face, and telephone conversation to written communication (use of communication book). Group meetings for parents of handicapped children were held by one urban day care program.

Parent involvement in the program usually took the form of volunteering in the classroom or visiting the program. Other ways parents were involved included carrying out a home program, bringing in materials and ideas, and using the "communication book".

Day care teachers felt parents needed help in two major areas: seeing progress in their child and support and assistance in dealing with a handicapped child. Other specific areas of assistance included speech, physiotherapy, social skills and behaviour change.

Day Care Aides

There were twelve respondents in all, five in the rural sample, and seven in the urban sample.

1. Reasons for integration.

Rural aides thought integration was desirable because it provided handicapped children with nonhandicapped peer models and allowed them to feel part of the group. They also felt that peers learn tolerance by the interaction with handicapped children provided by integration. The learning of tolerance and acceptance by the nonhandicapped child was the most frequent reasons urban aides gave for integration. Other reasons included benefits to the handicapped child such as stimulation provided by peers, enhanced self esteem, learning of daily living skills and the opportunity to play and learn like normal children.

Difficulties arose in the integration process when staff were poorly trained or too few in number. Additional difficulties included inadequate physical space, support systems, preparation time, and disruptive behaviour exhibited by the handicapped child.

2. Criteria for successful integration.

Three broad criteria were used by rural aides to assess integration: can the child function in the program (for example, play with peers), has the child made any progress and can the child go on to attend a regular school program? Similar criteria were used by urban aides: does the child display appropriate behaviour, can the child interact with peers, has progress been made in developmental areas such as cognition and motor skills, and can the child function independently in the classroom?

3. Aide preparation for integration.

Preservice training for both urban and rural aides was extremely diverse. Training varied from post secondary work in nursing, social work, rehabilitation, and education to no post secondary education but previous related work experience, or some combination of both. Inservice training was also varied and idiosyncratic. One source mentioned in both samples was the University of Lethbridge correspondence course.

Most rural aides (80%) felt they were adequately trained for their positions. Only 29% of urban aides however, were satisfied with their preparation. They felt they needed more knowledge of resources, materials, and types of handicapping conditions. Urban aides also felt orientation sessions, time with handicapped child prior to enrolment,and more on-going consultation was necessary.

4. Individualized program preparation.

All rural aides indicated that individual programs were prepared for the handicapped child. These were prepared by the aide in consultation with other staff or outside agencies. Many urban aides (71%) stated that individual programs were planned for the handicapped child. These were done either by the aide alone or in consultation with various other professionals. Most rural (80%) and urban (86%) aides stated that programs were planned and implemented by the aide. Resources for program planning and development included other staff in day care, special consultants, and parents.

5. Goals.

Aides' responses (or lack of them) to this question suggested they had little idea how to define specific goals for the handicapped child or how to achieve these goals. Goals listed by rural aides included preparation for kindergarten and greater independence.

Urban aides described the following as goals: bringing child's functioning to age level, better communication and cognitive skills, better memory, and social and emotional maturity. No specific materials or program activities were identified by either group.

6. Program Restrictions.

In the rural group 50% of the aides felt the handicapped child was restricted from total involvement in the regular program. Restricted activities were either outside activities or gross motor activities. None of the urban aides felt their handicapped child were restricted from regular program.

7. Specific Teaching Strategies.

The handicapped children spent from 0% to 50% of their time in one to one instruction, with most spending less than 20%. Techniques used to teach basic concepts and skills included repetition, task analysis and backward chaining, levels of prompting, presenting same skill in a variety of ways, generalizing from one to one to outside environment. listening, role playing, and observing. No specific materials were described although general activities included games, rhythm exercises, singing, copying, and play.

8. Planning for generalization.

About half of the aides (58%) described specific plans for generalization including sending materials or suggestions home for practise, extending skills being learned in one to one to the group setting, and communicating program goals to the entire child care staff.

9. Teaching socialization.

Three fourths of aides (both rural and urban) planned specifically to enhance socialization. Most techniques consisted of aide intervention techniques such as talking to the handicapped child if problems occur, have the handicapped child help staff, including the child in regular games and activities (both group and one to one) partnering the handicapped child with nonhandicapped children or including nonhandicapped children in one to one sessions, and placing handicapped child in activities that require a natural situation. Comments on socialization varied, but most aides indicated this was an area of difficulty for the handicapped child.

10. Frequency of behaviour problems.

The majority of aides (67%) reported that the handicapped child in their program displayed behaviour problems, including aggression (mentioned by 5 of 8 positive respondents) frustration, moodiness, passivity and temper tantrums.

11. Program Assessment.

A variety of tools are used to measure the handicapped child's progress. Most often mentioned was the Portage and checklists (six times for each). Other tools included formal assessment, daily logs, goal oriented charting, the Vulpe, and outside agency assessment. Frequency of assessments varied widely.

12. Parental Involvement

Contact between aides and parents varied widely from daily to as needed or never. Some aides also differentiated between formal and informal meetings with parents as the frequency of each type differed.

Day care aides reported an absence of group meetings for parents of special needs children.

Many aides (75%) felt parents were involved in their programs. Type of involvement included home programming, visiting and observing in centre, and providing communication between home and school. Aides felt parents needed most help with home programming, support and assurance. Other areas of assistance included future placement plans, basic hygiene, letting the child be independent, goal setting, and providing feedback regarding their child's progress.

Summary - Day Care Staff

Despite a greater total number of respondents(aides and teachers) in the day care sample (30) compared with 28 in the ECS sample, the responses of the day care group were fewer in number and less detailed.

With the exception of urban aides, day care staff were generally more satisfied than ECS staff with the adequacy of their training for the integration experience. Responses within the day care group, that is, from aides and teachers, were quite consistent.

Aides were more likely than teachers to see the handicapped children as exhibiting behaviour problems. Similarly rural aides spent more of their time in one to one instruction with the handicapped child than urban aides. One major difference between the ECS and the day care groups was the involvement of outside agencies. In the day care group, programs for the special needs children were more likely to be planned, implemented and/or evaluated by an outside agency than they were in the ECS group.

Parent Involvement and Satisfaction with Program

This information is part of the data collected during the parental interviews. All parents in both day care and ECS groups felt their child enjoyed the program they were attending. Tables 19 and 20 present a summary of these data. Most parents based their judgment on their child's behaviour, stating that they enjoyed attending the program, or at least were not reluctant to attend. Parents reported that their child's attendance in an integrated setting affected their functioning outside of the program in many ways. Some parents felt their children did not see themselves as different as a result of being in an integrated setting, that it was a normalizing experience for them. The most common response was that placement in an integrated setting enhanced their child's socialization skills. Other areas of enhanced functioning included increased language, greater independence, and improved behaviour. Parents also mentioned enhanced self esteem as a

TABLE 19

PARENTAL SATISFACTION

		E.C.S.		Day Care	
		Rural (n=12)	Urban (n=15)	Rural (n=11)	Urban (n=21)
Adequate communication with other parents	Yes	83%	60%	50%	40%
	No	17%	40%	50%	60%
Could school be more helpful	Yes	8%	36%	36%	24%
	No	92%	64%	64%	76%
Specific goals not being met	Yes	8%	7%	18%	10%
	No	92%	91%	82%	90%
Support services adequate	Yes	67%	73%	64%	68%
	No	33%	27%	36%	32%

TABLE 20

PARENTAL INVOLVEMENT

Care		E.C.S.		Day Care	
		Rural	Urban	Rural	Urban
Familiarity with program	Yes	92%	87%	91%	85%
	No	8%	13%	9%	15%
Visit program	Yes	100%	93%	64%	70%
	No	0%	7%	34%	30%
Is program adequately designed	Yes	83%	100%	64%	71%
	No	17%	0%	36%	29%
Aware of individual goals	Yes	84%	80%	64%	75%
	No	14%	20%	34%	25%
Involved in goal setting	Yes	80%	40%	33%	47%
	No	20%	60%	67%	53%
Home suggestions provided	Yes	42%	53%	44%	50%
	No	58%*	47%*	66%*	50%*
Teachers responsive to parents suggestions	Yes	91%	90%	55%	67%
	No	9%	--	45%	33%
Adequate communication with teacher	Yes	100%	100%	91%	95%
	No	--	--	9%	5%

* many of these parents received program suggestions from alternative programs, or did not feel a need for such suggestions.

result of integration.

The majority of parents in both day care and ECS groups felt they were familiar with the overall program at their child's school or centre. A high proportion of ECS, and a slightly smaller proportion of day care parents visited their child's program on a regular basis. The frequency of visits ranged from daily to once a year and two thirds of the parents visited the program every 4 months or less. Parents felt the individual programs designed for their children were adequate, although a higher proportion of ECS parents expressed satisfaction with their child's program. The following difficulties were expressed by day care parents: the day care had too much unstructured time, the child needed more instruction and direct supervision, and the aide should expect more of the child.

The majority of parents were aware of individual objectives that had been established for their child and could give specific illustrations. With the exception of the rural ECS group, a much smaller proportion of parents reported they were directly involved in the establishment of individual program goals.

About half of the parents in each group stated that they received techniques, ideas or materials to use at home. With those parents who did not receive suggestions, however, many indicated that this was by choice. Frequently they were already receiving suggestions from a different, more specialized source, or they did not feel they needed input from the program regarding home activities.

Most parents in the ECS sample (90%) felt their child's teacher was responsive to their suggestions. Only 67% of urban day care and 55% of rural day care parents, however, felt teachers were responsive to their suggestions. Sources of dissatisfaction centered around behaviour management and the amount of time and effort spent on the child's program.

Parents were very positive about the amount of communication they had with their child's teacher. Several parents mentioned the use of a daily communication book and made comments such as "always available, impressed with the amount of time spent with us, and we have good rapport."

At least 40% of parents in the urban ECS, urban day care and rural day care groups felt they would like more contact with other parents. A large number of parents expressed a desire for informal sharing meetings and having the opportunity to talk over and gain support from other parents. Many parents indicated they already were involved in parent groups relating to their child's handicap.

Specific ways that programs could be more helpful included: greater availability of speech therapy within the program, better transportation system, smaller groups, help with future school placement, more communication with other parents and more and better trained staff.

Few parents (18%) had objectives for their child which were not being met. Unmet objectives were generally of two kinds: more emphasis on academic skills was needed or more structure and discipline was needed in the program.

Approximately 30% of parents felt current community support services were inadequate. Major concerns included the following: long waiting periods for specialized services, particularly speech therapy, services lacked co-ordination, professionals particularly physicians, lacked necessary attitudinal and personal skills to deal effectively with parents, there was a need for temporary relief and homemaker services, more parent groups were needed and program staff were inadequately trained.

J. Summary

An attempt will be made to summarize and highlight some of the more important findings presented in thepreceding pages.

In regard to the nature of children currently being integrated in Alberta preschools, it appears that demographically they and their families are no different from the general population with regard to statistics such as family size, income, parental education, and occupation. Diagnostically these children are predominantly mildly to moderately mentally handicapped, with some children demonstrating sensory, physical or multiple handicaps. Normative assessments using the McCarthy confirmed that the majority of children were mildly to moderately delayed, although the urban ECS children were significantly higher functioning. The Criterion Referenced Assessment device identified the following deficiences for the group as a whole: advanced and primary pre-academic skills, advanced motor skills, expressive language skills, and self help skills.

The interaction patterns of the handicapped children in these settings are consistent with other research findings (Guralnick, 1981): lower functioning children interact less and demonstrate more unsophisticated play than their higher functioning peers (handicapped and nonhandicapped). Further, there was little evidence of imitative behavior occurring between the handicapped and nonhandicapped children. Somewhat unique in this study was the high level of verbal interaction demonstrated by the handicapped children.

The results from the S.A.A.T. also substantiated other researcher's findings(Dunlop,1980; Asher et al, 1979; Guralnick 1981): finding a suitable instrument for collecting reliable attitudinal data is extremely difficult for children of this age. The S.A.A.T. was easily and quickly administered, but without norms it was not particularly useful. It was designed and would seem more appropriate for use in a repeated measures design.

Programming characteristics were diverse, however, some common elements should be emphasized. For example, the number of nonhandicapped children far exceeded the number of handicapped children in each setting. The staff all felt positively toward integration, but many felt their training was inadequate, particularly ECS teachers, 70% of whom felt their training needed improvement. It appeared that individual programs were planned more often in rural than in urban programs and, although the planners varied, it was generally true that day care programs received more assistance from outside agencies than ECS programs. In addition, special needs aides were more prevalent in day care programs and they usually implemented one to one instruction programs. Most programs included some general plans for enhancing the children's socialization and generalization skills. Also staff identified these children as displaying a disproportionately high number of behavior problems.

Parents were involved in their children's programs in a variety of different ways, but generally speaking they were very satisfied with their child's placement in an integrated setting. Approximately 40% of the parents interviewed felt they would like more contact with other parents in the form of informal sharing meetings. In programs with aides, the aides tended to have more frequent contact with parents than teachers.

IV. CONCLUSION AND RECOMMENDATIONS

This study examined four important aspects of early educational integration within the context of Alberta preschools. The information collected allows us to make some observations and recommendations about each of these aspects as they relate to the implementation of integration and directions for future research in this area. These observations and recommendations will be presented under the four broad dimensions of integration that have been used throughout this study.

The handicapped child and his family

First, there was almost uniform agreement among parents of the handicapped children that integration was a positive experience for the children being served. Parents were happy and felt well informed about the individual programs their children were receiving. We did not collect information, however, on the effects of integration on the normally developing children and this remains an important area for future research.

Another area of difficulty is the vastly different types of children currently being identified for special assistance through the current funding structures. Particularly under the ECS, Category A designation, where the children identified varied from demonstrating severe mental and/or physical handicaps with an accompanying number of extensive educational needs, to mildly handicapped children requiring little or no extra assistance within the classroom. A more standardized approach is needed to identify those children in greatest need of services than currently exists. These criteria, however, need to be flexible enough to meet the special regional needs which exist throughout the province.

Somewhat related to this issue is the obvious discrepancy between children being served in urban ECS versus rural ECS programs. This may be attributable to the existence of more specialized programs in urban centres although this remains to be proven. It is obvious, however that rural programs require additional support services and thus funding formulas should be adjusted accordingly. Further, it was not clear how extra funds were being used to provide special services in the urban ECS programs. Indeed there was great confusion within these programs as to what funds were available and how they could be accessed. This was obviously an area requiring clarification and clearer guidelines.

It was quite clear from the interviews with the parents and teaching staff of rural programs that additional specialists are required to provide outreach help to rural programs integrating children with special needs. Almost all staff indicated the need for specialist consultation with such professionals as speech therapists, physiotherapists, and child development specialists. Additional services could be made available to rural areas such as providing outreach teams from the major centres in the province or establishing regional assessment centres. In this way more immediate consultation can be provided to integrated day care and kindergarten programs regarding the unusual conditions a child may exhibit.

Interaction patterns: handicapped children, peers and teachers

Our study found what other researchers have found: physical integration of handicapped children in regular programs does not necessarily lead to increased interaction between the two groups of children. Although disappointing our results were not unexpected, and point to the need for continued research in this area. Further, the information available from existant research must be translated into specific teaching strategies if it is to be useful to program personnel. There must be greater cooperation between research centers such as Universities and educational programs in testing new instructional strategies. Perhaps we should make use of the concept of "demonstration programs", whereby certain programs could be funded to develop, try out, and disseminate new approaches in educational practise. Within the day care context, several of the Community College Early Childhood training programs already have demonstration day care centres that are readily suited to this role. ECS programs could be identified within the community to work in conjunction with University teacher training programs in the same way. Perhaps these centers could serve as clearing houses for specialized curriculum materials, assessment devices and so forth needed for integrated programming. These will be described later in this chapter.

Nonhandicapped peers: attitudes

The current study did not allow the pronouncement of any very specific or definitive comments with regard to this aspect of integration. It is obvious that more creative and longitudinal research is needed to examine the impact of integration on the attitudinal development of the nonhandicapped children. As well, work is needed to develop more appropriate and useful tools for measuring attitude development and change in young children. The S.A.A.T. may have some potential in this regard particularly if some adaptations were made to the current instrument. Such adaptations might include the addition of specific questions regarding the nonhandicapped child's knowledge of the term handicapped.

Program characteristics

It is in this last area that the majority of observations and recommendations will be made.

Staff responses to the questionnaires revealed a lack of organizational structure and unclear role definitions with regard to the planning and implementation of the handicapped child's individual program. In some day cares/ECS's individual programs were planned and implemented by the same individual, either the aide or the teacher, but in many programs plans were made by one or a group of individuals and implemented by someone else, usually the aide. It seems that one person should be designated as the case manager or person responsible for insuring that a program is planned and implemented for the special needs child. The classroom teacher or the day care supervisor seems most appropriate for this position as they are responsible for planning the total program for the entire group of children. Having the handicapped child's program planned by different people than the rest of the group fosters segregation and seperation within the class. Further, the teacher/supervisor is usually the most highly trained individual in the program, and theoretically best equipped to handle the difficult job of designing an individual program for the child with special needs.

One of the large urban boards provided an example of this approach. Handicapped children in this system were grouped and placed with a specially trained early childhood - special education teacher. An aide was provided in these classrooms, but was used by the teacher to free her to plan and implement appropriate programs for the special needs children. This approach might insure that a larger number of handicapped children are placed within one program. Thus avoiding the negative outcomes associated with placing only one handicapped child in a program that are suggested in the literature.

The lack of specific planning strategies aimed at maximizing the integration experience was also apparent from the staff's responses to the questionnaires. The existence of an organized approach to educational goals is an integral part of any learning experience. This becomes even more critical in integrated programs where there is a wide range of individual differences among children and the lack of standard curricula or materials.

It would seem very important, therefore, that a program planning process, such as the individual educational plan concept(IEP), be established to assist in the development of the handicapped students' program in the integrated setting.

This process should include an actual IEP outline, an assessment of the child's strength and weaknesses, the establishment of long-term and short-term objectives based on their strengths and weaknesses, the provision of specific intervention processes to develop competencies and an evaluative process to determine if the child is making satisfactory progress towards these objectives. This planning process should be flexible enough to meet the varying needs of children in integrated settings throughout Alberta. This planning process should be a major element of any pre or inservice program.

Many staff(two/thirds in the case of ECS teachers) working in integrated programs felt inadequately trained and prepared for integration. Inservice and preservice education must be made available. As previously indicated universities and colleges will have to come to terms with the merging roles of special and general education. Special education courses should be included within each teacher's educational program. In addition, inservice and staff development modules should be provided in order to up-grade field staff competencies. Skills and knowledge in individual program planning and each of its components as described above, as well as in the other dimensions of integrating handicapped children into preschool programs should be included in such modules. These experiences should be made available to staff at optimum times and locations so that all persons functioning as aides or teachers in day care or ECS programs could develop the special skills needed in an integrated setting.

Related to the training issue, is the lack of consistent curriculum and instructional materials available to programs integrating handicapped children that was reflected by staff's responses to the questionnaires. Some way of collecting these materials in several centralized locations is needed. As well, a method whereby materials can be quickly and easily accessed by programs needing them should be developed. These materials should be available to both ECS and day care programs.

The lack of training for most personnel involved in this field combined with the absence of specific program requirements necessitates the establishment of an on-going formative evaluative process to assist programs in determining if they are meeting the needs of the handicapped children integrated into their programs. Perhaps this evaluative process could be tied into the funding procedures for special needs children.

This evaluative process would also be able to assess, in part, the impact of staff development and preservice training programs for persons working in this field. As well issues such as appropriateness of programs for particular children and later school placement could be addressed. The inclusion of consumer evaluation would also be an important dimension within such an on-going evaluative process.

In conclusion, it would seem that integration at the preschool level is here to stay. This current study examined four dimensions of integration and made some recommendations for improving the current service delivery system. Important areas for future research were also identified. Of major importance in the effort to improve current services will be the willingness of various professionals, government officials, and program operators to work together in the development of quality integrated programs that would assist in maximizing the potential of the handicapped child.

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Appendix A

SURVEY OF EXCEPTIONAL CHILDREN
INTEGRATED INTO DAY CARE PROGRAMS

Program Information

NAME OF PROGRAM:______________________________

LOCATION:______________________ Rural ☐ Urban ☐ Population__________
(City or Town)

TOTAL ENROLLMENT IN PROGRAM__________ NUMBER OF EXCEPTIONAL CHILDREN________

Child Information

Identification (Please code by number) ☐☐ (Region) ☐☐☐☐ (Child)

Male ☐ Female ☐ Birthdate______________________

Date of most recent assessment______________________

Agency responsible for most recent assessment______________________

Attendance in program: Full time ☐ Part time ☐ Length of time in program ☐☐ (Months)

Indicate area or areas of exceptionality, including severity

Speech and/or language__________

Hearing__________

Health (Medical)__________

Social-Emotional Behavior__________

Vision__________

Physical or motor performance__________

Environmental or cultural factors__________

Intellectual__________

Academic achievement__________

Other__________

Completed by______________________ Position:______________________

Appendix B

E.C.S.
-at 2 years noticed language delay, at 5 years of age after many hearing tests, an EEG showed seizure activity;
-as an infant, never opened left hand, paediatrician said nothing wrong; changed doctors, child was referred at once;
-noticed language delay at two years, told "not to worry";
-infant ill from birth, told "all in your head", 1 1/2 years later diagnosis made;
-I know something was wrong, told "nothing serious" months later undiagnosed bladder infection resulted in damage to the optical nerve;
-at three, noticed speech delay, doctor said "would outgrow it", subsequent testing diagnosed speech problem.

Day Care
- at 3 1/2 had seen many doctors with no diagnosis, referred to ENT specialist who recommended ear surgery, child is now fine;
- at 1 1/2 years noticed delay, told general practitioner but not until one year later was child assessed and confirmed with developmental delay;
- delay noticed by grandmother at one year, physician said "wait", at 19 months diagnosis made;
- since birth parents concerned, and "bugging the doctor" finally when not walking at 18 months testing done;
- at one year child delayed, but nothing done until onset of seizures 1 1/2 years later;
- at 4-5 months not sitting; told he would "come around", at 10 months began with an early intervention program.

Correlation Matrix

Demographic Variables, All Behaviours and Play Activities

	Age	Prog.	Mc	Verb init. peer B_1	Verb receipt peer B_2	M/g init. peer B_7	M/g receipt peer B_8	Verb init. peer B_{11}	Verb receipt peer B_{12}	Pos. reinf teach B_{15}	M/g init. teach B_{17}	M/g receipt teach B_{18}	Verb init h.p. B_{21}	Verb receipt h.p. B_{22}	Compl B_{34}	Soc. P_1	Isol. P_2	On Looker P_3	Parall P_4	Coop P_5	Group P_6	Indiv P_7
Age			-.213						.286	.254					.537						.222	.269
Prog					-.2096								.2312						-.3297		.4918	
Mc				.256	.271				-.286	-.221		-.213					-.259			.314		
B_1					.749	.439	.219		-.293			-.353					-.374	-.232	.5515	.217		-.2232
B_2						.267	.569		-.289			-.339					-.349	-.253	.5814	.205	-.277	
B_7							.257										-.270	-.233	.349			
B_8																	-.208		.226			
B_{11}									.614		.211				.224			-.232	-.226			.515
B_{12}										.246	.235	.509			.523				-.246	-.302		.748
B_{15}											.323	.207						.256				.2086
B_{17}												.298										.241
B_{18}																						.493
B_{21}														.568						.2164	.238	
B_{22}													.568							.203		
B_{34}																						.3884
P_1																						
P_2																				-.292	-.293	
P_3																						
P_4																					-.481	-.268
P_5																						-.220
P_6																						
P_7															.388							